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 substance identification.

=> d l40 bib abs hitstr retable tot

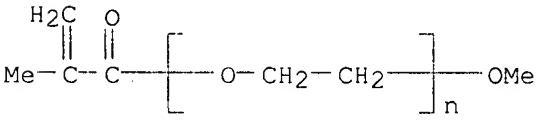
L40  ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2008 ACS on STN
AN   2005:612574  HCAPLUS
DN   143:136276
TI   Polymer solid electrolytes for batteries
IN   Shimada, Mikiya; Niitani, Takeshi
PA   Nippon Soda Co., Ltd., Japan
SO   PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     ---------------     ----   --------    --------------------   --------
PI   WO 2005064620        A1    20050714    WO 2004-JP19710        20041222 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
             RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
             MR, NE, SN, TD, TG
PRAI JP 2003-430626       A     20031225  <--
     JP 2004-296309       A     20041008
AB   Disclosed is a polymer solid electrolyte having both excellent ion conductivity
     and shape stability.  A polymer solid electrolyte was characterized by
     containing a polymer having an ion-conducting region, an additive having at
     least one chemical bond selected from the group consisting of urethane bond,
     thiourethane bond, ureide bond, imide bond and amide bond in a mol., and
     an electrolyte salt.
```

IT **9081-45-2P**, Styrene-methyl polyethylene glycol monomethacrylate copolymer **858181-45-0P**, Styrene-2-hydroxyethyl acrylate-polyethylene glycol monomethacrylate methyl ether copolymer
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(polymer solid electrolytes for batteries)

RN 9081-45-2 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxy-, polymer with ethenylbenzene (CA INDEX NAME)

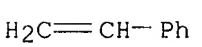
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 100-42-5
CMF C8 H8



RN 858181-45-0 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
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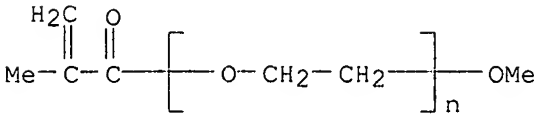
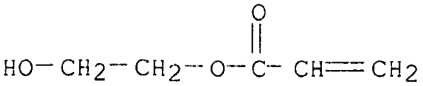
CCI PMS



CM 2

CRN 818-61-1
CMF C5 H8 O3



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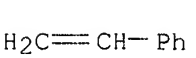
CRN 100-42-5
CMF C8 H8



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Hitachi Chemical Co Ltd	2001			JP 200143731 A	
Sanyo Chemical Industri	2003			JP 2003257491 A	HCAPLUS

L40 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:323497 HCAPLUS
DN 142:395064
TI Polymer solid electrolytic electric battery, electrode and those production methods
IN Kanamura, Kiyoshi; Kawamura, Kiyoshi; Shintani, Takeshi; Shimada, Mikiya; **Aoyagi, Koichiro**
PA **Nippon Soda Co., Ltd., Japan**
SO Jpn. Kokai Tokkyo Koho, 40 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

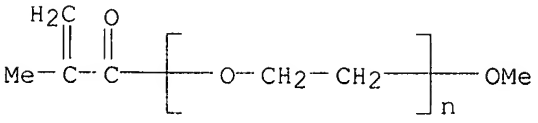
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005100966	A	20050414	JP 2004-240036	20040819 <--
PRAI JP 2003-295880	A	20030820 <--		

AB The disclosed battery contains polymer electrolyte comprising block copolymer having ethylene glycol derivative-acrylic acid derivative ester polymer block, and vinyl polymer block(s). The disclosed electrodes for the battery contains electrode active substance, an electrolyte salt, and the block copolymer. Fabrication process for the battery is also disclosed. The polymer electrolyte has excellent thermal stability, phys. properties, and ion conductivity
IT **697284-07-4P 849950-63-6P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer electrolytes for lithium batteries)
RN 697284-07-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

CM 1

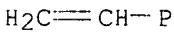
CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2

CCI PMS



CM 2

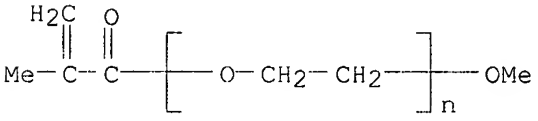
CRN 100-42-5
CMF C8 H8



RN 849950-63-6 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), pentablock (9CI) (CA INDEX NAME)

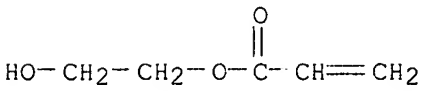
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



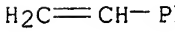
CM 2

CRN 818-61-1
CMF C5 H8 O3



CM 3

CRN 100-42-5
CMF C8 H8



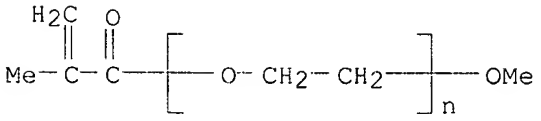
L40 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:260319 HCAPLUS
DN 142:339051
TI Composition for polymer solid electrolyte, polymer solid electrolyte, polymer solid electrolyte battery, ion-conductive membrane, copolymer and process for producing the copolymer
IN **Muramoto, Hiroo; Niitani, Takeshi; Aoyagi, Koichiro**
PA **Nippon Soda Co., Ltd., Japan**
SO PCT Int. Appl., 128 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005027144	A1	20050324	WO 2004-JP576	20040123 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005089510	A	20050407	JP 2003-321155	20030912 <--
EP 1667168	A1	20060607	EP 2004-704735	20040123 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
CN 1849674	A	20061018	CN 2004-80025920	20040123 <--
US 20070040145	A1	20070222	US 2006-571998	20060309 <--
KR 779895	B1	20071128	KR 2006-706986	20060411 <--
PRAI JP 2003-321155	A	20030912 <--		
WO 2004-JP576	W	20040123 <--		

AB Polymer solid electrolytes excelling in thermal properties, phys. properties and ion conductivity and being close to practical level for use in batteries are disclosed. In particular, a composition for polymer solid electrolyte characterized in that the composition contains a copolymer and an electrolyte salt, the copolymer having repeating units of the formula: [CR1R2CR3CO2(CHR4aCHR4bO)mR5] (R1, R2, R3 = H, C1-C10 hydrocarbyl; R4a, R4b = H , Me; Me; R5 = H, hydrocarbyl, acyl, silyl; and m is an integer of 1 to 100) and repeating units of the formula: CR6R7CR8R9 (R6, R7, R8 = H, C1-C10 hydrocarbyl; R9 = an organic group having at least one functional group selected from hydroxyl, carboxyl, epoxy, an acid anhydride group and amino).
IT **697284-07-4P 848439-41-8DP**, desilylated **848439-42-9DP**, desilylated **848439-43-0DP**, deethylated **848439-44-1DP**, debutylated **848442-02-4DP**, desilylated **848442-03-5P 849950-63-6P 877834-07-6P 877837-29-1DP**, desilylated
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polymer electrolyte compns. containing)
RN 697284-07-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

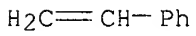
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

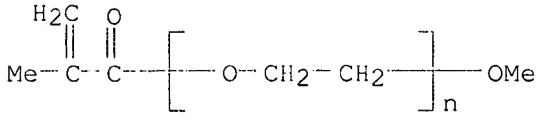
CRN 100-42-5
CMF C8 H8



RN 848439-41-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[(trimethylsilyl)oxy]ethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), triblock (9CI) (CA INDEX NAME)

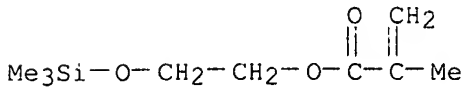
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



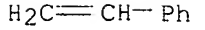
CM 2

CRN 17407-09-9
CMF C9 H18 O3 Si



CM 3

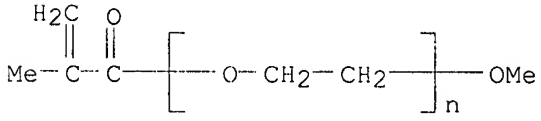
CRN 100-42-5
CMF C8 H8



RN 848439-42-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, trimethylsilyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), diblock (9CI) (CA INDEX NAME)

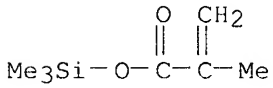
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 13688-56-7
CMF C7 H14 O2 Si



RN 848439-43-0 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene and 1-ethenyl-4-(1-ethoxyethoxy)benzene, triblock (9CI) (CA INDEX NAME)

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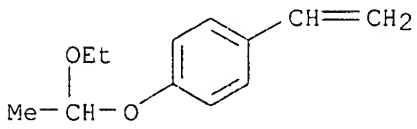

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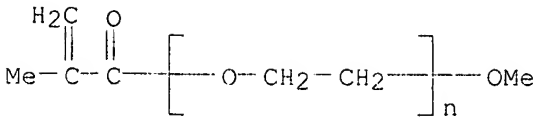
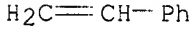
CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 3

CRN 100-42-5
CMF C8 H8



RN 848439-44-1 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with 1-butoxy-3-ethenylbenzene and ethenylbenzene, block, graft (9CI) (CA INDEX NAME)

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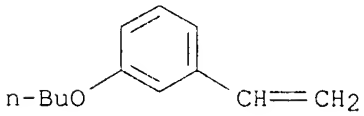

CM 2

CRN 26915-72-0
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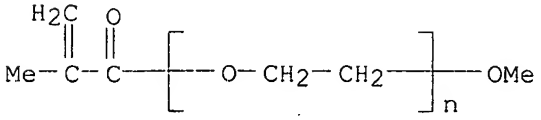
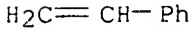
CCI PMS



CM 3

CRN 100-42-5
CMF C8 H8

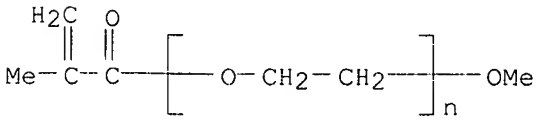


RN 848442-02-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-[(trimethylsilyl)oxy]ethyl ester, polymer

with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), triblock (9CI) (CA INDEX NAME)

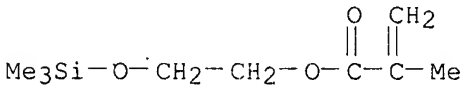
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 17407-09-9
CMF C9 H18 O3 Si



RN 848442-03-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), triblock (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
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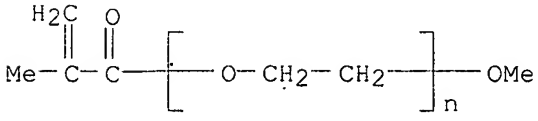
CCI PMS



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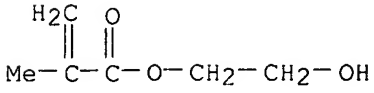
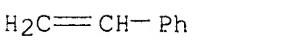


CM 3

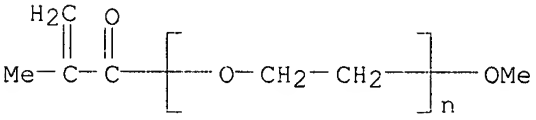
CRN 100-42-5
CMF C8 H8



RN 849950-63-6 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), pentablock (9CI) (CA INDEX NAME)

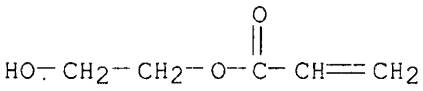
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



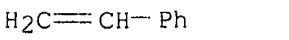
CM 2

CRN 818-61-1
CMF C5 H8 O3



CM 3

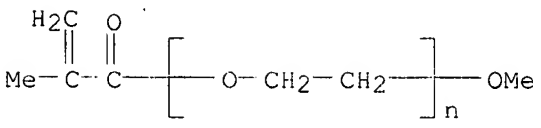
CRN 100-42-5
CMF C8 H8



RN 877834-07-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

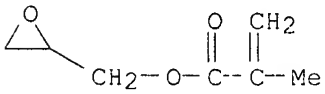
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



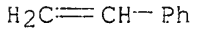
CM 2

CRN 106-91-2
CMF C7 H10 O3



CM 3

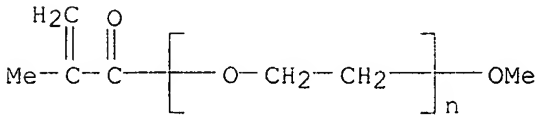
CRN 100-42-5
CMF C8 H8



RN 877837-29-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, trimethylsilyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), pentablock (9CI) (CA INDEX NAME)

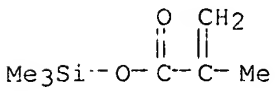
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



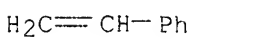
CM 2

CRN 13688-56-7
CMF C7 H14 O2 Si



CM 3

CRN 100-42-5
CMF C8 H8



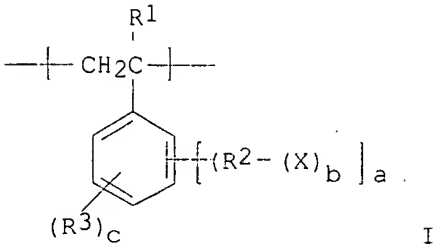
RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Fukoku Co Ltd	1998			JP 10-45994 A	HCAPLUS
Kanemura, K	2003		53	Nano Kozo o Seigyo S	
Matsushita Electric Ind	1993			JP 05-120912 A	HCAPLUS
Nippon Soda Co Ltd	2004			JP 2004107641 A	HCAPLUS
Nissan Motor Co Ltd	2003			JP 2003217594 A	HCAPLUS
Shimada, M	2003		53	Nano Kozo o Seigyo s	
Shin-Etsu Chemical Co L	1995			JP 07-109321 A	HCAPLUS
Shin-Etsu Chemical Co L	1995			JP 07-230810 A	HCAPLUS
Shintant, T	2003		52	Nano Kozo o Seigyo S	
Telefonaktiebolaget Lm	2003			WO 0146280 A1	HCAPLUS
Telefonaktiebolaget Lm	2003			US 20010033974 A1	
Telefonaktiebolaget Lm	2003			JP 2003518172 A	
Ube Industries Ltd	2002			JP 2002260441 A	HCAPLUS
Ube Industries Ltd	2003			JP 200345226 A	

L40 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:780751 HCAPLUS
DN 141:278675
TI Novel graft copolymer and process for producing the same
IN **Muramoto, Hiroo; Niitani, Takeshi**
PA **Nippon Soda Co. Ltd., Japan**
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004081068	A1	20040923	WO 2004-JP3055	20040310 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	JP 2003-69757	A	20030314 <--		

GI



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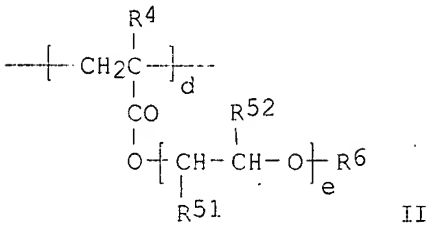


II

AB The present invention relates to (i) a novel graft copolymer which has polyether chains in branches and is usable as a base for solid electrolytes having high ionic conductivity and (ii) a solid electrolyte comprising the graft copolymer and an electrolyte salt. The copolymer is characterized by having repeating units I, wherein R1 = H or C1-10 a hydrocarbon group; R2 = an active halogen atom-containing functional group; R3 = a halogen atom, or an organic group; X = a copolymer having repeating units II and repeating units comprising a nonpolar moiety; R4 = H or a (substituted)C1-10 hydrocarbon group; R51, R52 = independently H, hydrocarbon, or C1-4 alkyl group; R6 = H, hydrocarbon, acyl, silyl, phosphoryl, hydrocarbon phosphoryl, or hydrocarbon phosphonyl group; a = 1-3 integer; b = 1 or 2; c = 0 or 1; d = 1-1000 integer; and e = 1-100 integer. Thus, 131.0 mmol 4-chloromethylstyrene was polymerized in the presence of 9.6 mmol 1-(2,2,6,6-tetramethylpiperidinyloxy)-1-phenylethane at 125° for 12 h to give a polymer with Mn 1300 and polydispersity 1.35, 0.7 mmol of which was polymerized with 400 mmol styrene at 125° for 24 h, graft-copolymd. with Blemmer PME 1000 to give a graft-block copolymer with Mn 310,000 and polydispersity 1.52, 2 g of which was dissolved in 18 g acetone, mixed with 0.2 g lithium perchlorate, cast onto a Teflon, and dried at 60° for 24 h to give a solid polymer electrolyte with ion conductivity 5 + 10-4 S/cm.

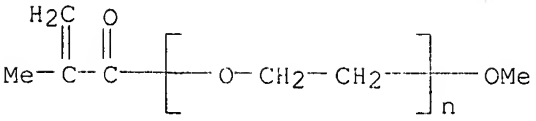
IT **760971-85-5P 760971-91-3P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(Blemmer PME 400, intermediate; preparation of graft copolymers for solid polymer electrolytes)

RN 760971-85-5 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with 1-(chloromethyl)-4-ethenylbenzene and ethenylbenzene, block, graft (9CI) (CA INDEX NAME)

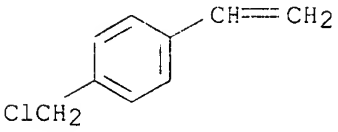
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



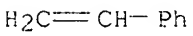
CM 2

CRN 1592-20-7
CMF C9 H9 Cl



CM 3

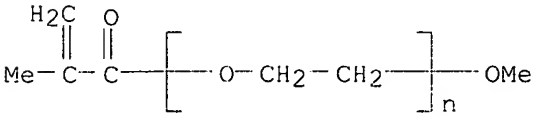
CRN 100-42-5
CMF C8 H8



RN 760971-91-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with 1-(chloromethyl)-4-ethenylbenzene and ethenylbenzene, graft, triblock (9CI) (CA INDEX NAME)

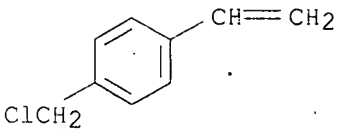
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 1592-20-7
CMF C9 H9 Cl



CM 3

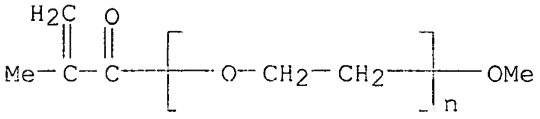
CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

IT **760971-85-5DP**, lithium complexes, perchlorate-containing
760971-91-3DP, lithium complexes, perchlorate-containing
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Blemmer PME 400; preparation of graft copolymers for solid polymer electrolytes)
RN 760971-85-5 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with 1-(chloromethyl)-4-ethenylbenzene and ethenylbenzene, block, graft (9CI) (CA INDEX NAME)

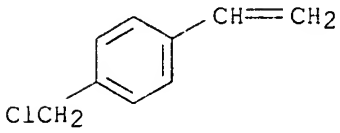
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

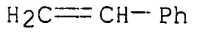
CRN 1592-20-7
CMF C9 H9 Cl



CM 3

CRN 100-42-5

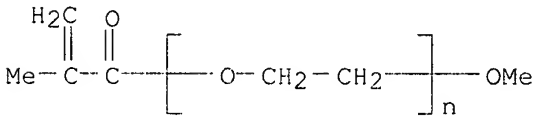
CMF C8 H8



RN 760971-91-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with 1-(chloromethyl)-4-ethenylbenzene and ethenylbenzene, graft, triblock (9CI) (CA INDEX NAME)

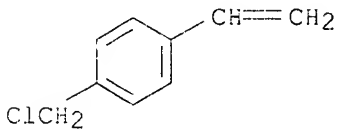
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



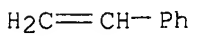
CM 2

CRN 1592-20-7
CMF C9 H9 Cl



CM 3

CRN 100-42-5
CMF C8 H8



RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Nippon Shokubai Co Ltd	2002			US 20010020084 A1	HCAPLUS
Nippon Shokubai Co Ltd	2002			JP 2002121218 A	HCAPLUS
Nippon Shokubai Co Ltd	2002			CA 2329635 A1	HCAPLUS
Nippon Soda Co Ltd	2002			JP 2002226513 A	HCAPLUS
Nippon Soda Co Ltd	2004			JP 2004107641 A	HCAPLUS
Shin-Etsu Chemical Co L	1999			JP 11-43523 A	HCAPLUS
Shin-Etsu Chemical Co L	2000			JP 2000281737 A	HCAPLUS
Shin-Etsu Chemical Co L	2000			US 6322924 B1	HCAPLUS

L40 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:609449 HCAPLUS
DN 141:165708
TI Composition of polymer solid electrolyte
IN **Muramoto, Hiroo**; Shintani, Takeshi
PA **Nippon Soda Co., Ltd., Japan**
SO Jpn. Kokai Tokkyo Koho, 45 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2004213940	A	20040729	JP 2002-379656	20021227 <--
PRAI	JP 2002-379656		20021227 <--		

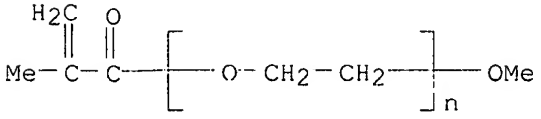
AB The title material is a total solid electrolyte and is characterized by having excellent thermal, phys., and ion conductive property. The polymer has an average mol. weight of 5000-1,000,000 and could contain the following substitution groups: hydrocarbon, acyl, silyl, carboxyl, hydroxide, amino group, ester group, and epoxy group. The repeating units of the defined group take 1-95% of the total repeating units in the copolymer. The electrolyte can be used for manufacturing of elec. cell, capacitor, sensor, EC element, or electro-optical conversion element.

IT **64696-14-6P 728930-40-3P 728930-41-4P**
728938-25-8P 728938-30-5P 728938-31-6P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(composition of polymer solid electrolyte for manufacturing of electrochem. devices)

RN 64696-14-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

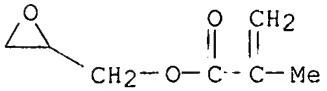
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



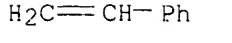
CM 2

CRN 106-91-2
CMF C7 H10 O3



CM 3

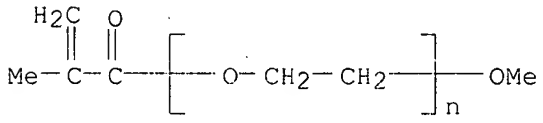
CRN 100-42-5
CMF C8 H8



RN 728930-40-3 HCAPLUS
CN 2-Propenoic acid, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

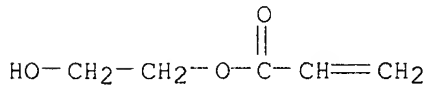
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



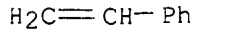
CM 2

CRN 818-61-1
CMF C5 H8 O3



CM 3

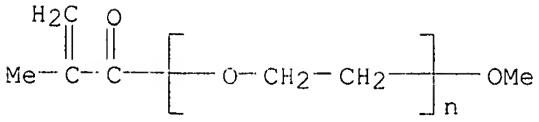
CRN 100-42-5
CMF C8 H8



RN 728930-41-4 HCAPLUS
CN Phenol, 4-ethenyl-, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

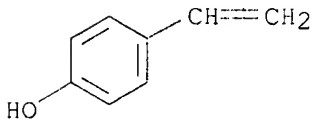
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 2628-17-3
CMF C8 H8 O



CM 3

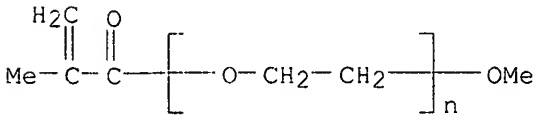
CRN 100-42-5
CMF C8 H8

$H_2C{=}CH{-}Ph$

RN 728938-25-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with ethenylbenzene and α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

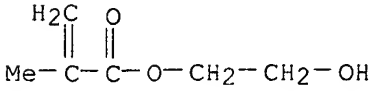
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



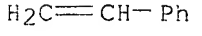
CM 2

CRN 868-77-9
CMF C6 H10 O3



CM 3

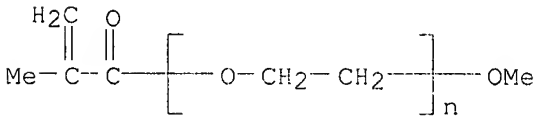
CRN 100-42-5
CMF C8 H8



RN 728938-30-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

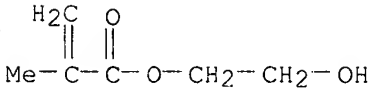
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

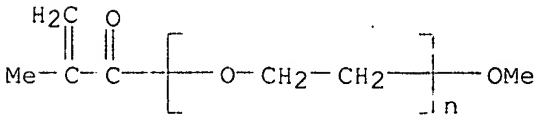
CRN 868-77-9
CMF C6 H10 O3



RN 728938-31-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

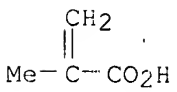
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 79-41-4
CMF C4 H6 O2



L40 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:80751 HCAPLUS
DN 140:149116
TI Solid polymer electrolyte
IN **Muramoto, Hiroo; Niitani, Takeshi**
PA **Nippon Soda Co., Ltd., Japan**
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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	AU 2003252245	A1	20040209	AU 2003-252245	20030723 <--
	JP 2004107641	A	20040408	JP 2003-200804	20030723 <--
	EP 1553117	A1	20050713	EP 2003-765362	20030723 <--
	EP 1553117	B1	20070117		
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	CN 1668662	A	20050914	CN 2003-817326	20030723 <--
	US 20050256256	A1	20051117	US 2005-523085	20050202 <--
PRAI	JP 2002-214603	A	20020723 <--		
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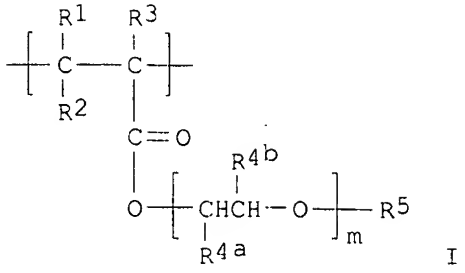


I

AB The present invention relates to (i) a solid polymer electrolyte which is excellent in thermal properties, phys. properties, and ionic conductivity and is on a level close to a practical level, especially a wholly solid electrolyte and (ii) a copolymer composition serving as a base for producing the electrolyte. The solid polymer electrolyte comprises (A) a copolymer comprising a block chain A comprising repeating units I, a block chain B comprising repeating units (CR6R7CR8R9), and a block chain C comprising repeating units (CR10R11CR12R13), these chains being arranged in the order of B, A, and C, and (B) an electrolyte salt, wherein R1, R2, R3 = independently H or C1-10 hydrocarbon, R1 and R3 may form a ring; R4a, R4b = independently H or methyl; R5 = H, hydrocarbon, acyl, or silyl group; R6, R7, R8, R10, R11, R12 = independently H or C1-10 hydrocarbon; R9 = aryl; R13 = aryl or heteroaryl; and m = 2-100 integer. Thus, 22.35 g Blemmer PME 1000 was polymerized in the presence of dichlorotris(triphenylphosphine)ruthenium, di-n-butylamine, and 2,2-dichloroacetophenone to give a polymer with Mn 122,500, 6.13 g of which was polymerized with 2.60 g styrene to give a styrene-polyoxyalkylene graft block copolymer with Mn 135,000, 1 g of which was mixed with 0.09 g lithium perchlorate, cast on a Teflon plat, and dried at room temperature for 24 h and 60° for 24 h to give a solid polymer electrolyte with ionic conductivity 3.8 + 10-4 S/cm at 23°.

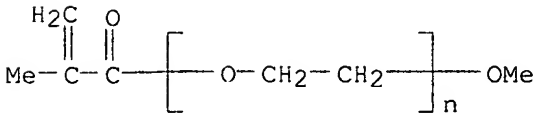
IT **112119-04-7DP**, lithium complexes, perchlorate-containing
112119-04-7P 651724-21-9P 697284-07-4P
846569-40-2P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(triblock; preparation of solid polymer electrolytes with good thermal properties, phys. properties, and ionic conductivity)

RN 112119-04-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxy-, polymer with ethenylbenzene, block (CA INDEX NAME)

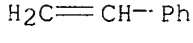
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

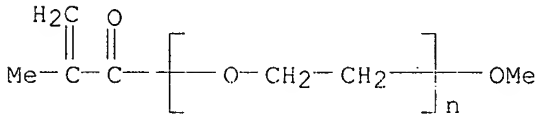
CRN 100-42-5
CMF C8 H8



RN 112119-04-7 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxy-, polymer with ethenylbenzene, block (CA INDEX NAME)

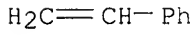
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

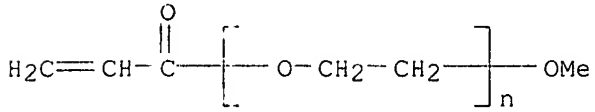
CRN 100-42-5
CMF C8 H8



RN 651724-21-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

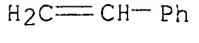
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

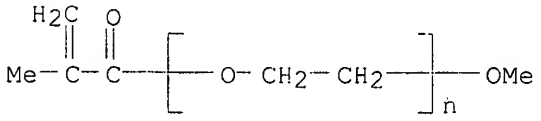
CRN 100-42-5
CMF C8 H8



RN 697284-07-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



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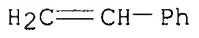
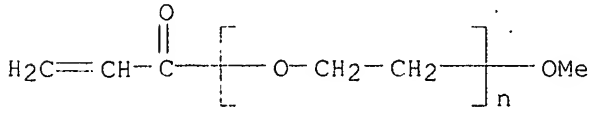
CMF C8 H8



RN 846569-40-2 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

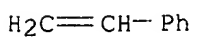
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 100-42-5
CMF C8 H8



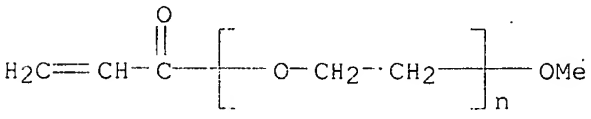
IT **651724-21-9DP**, lithium complexes, perchlorate-containing
697284-07-4DP, lithium complexes, perchlorate-containing

846569-40-2DP, lithium complexes, perchlorate-containing
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(triblock; preparation of solid polymer electrolytes with good thermal properties, phys. properties, and ionic conductivity)

RN 651724-21-9 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, block (9CI) (CA INDEX NAME)

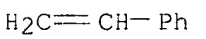
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

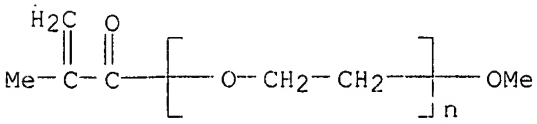
CRN 100-42-5
CMF C8 H8



RN 697284-07-4 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), α-(2-methyl-1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

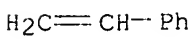
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 100-42-5
CMF C8 H8



RN 846569-40-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-(1-oxo-2-propenyl)-ω-methoxy-, polymer with ethenylbenzene, triblock (9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4
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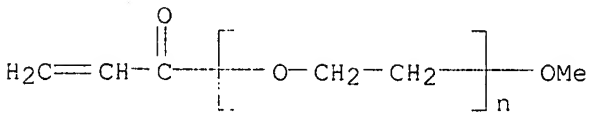
CCI PMS



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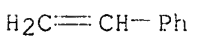


RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Shin-Etsu Chemical Co L	1998			JP 10-208545 A	HCAPLUS
Shin-Etsu Chemical Co L	1998			JP 10-237143 A	HCAPLUS
Shin-Etsu Chemical Co L	1998			US 6096234 A1	HCAPLUS
Shin-Etsu Chemical Co L	1999			JP 11-43523 A	HCAPLUS
Ube Industries Ltd	1991			JP 03-196407 A	HCAPLUS

L40 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1989:479596 HCAPLUS
DN 111:79596
OREF 111:13411a,13414a
TI Modified 1,2-polybutadiene for lamination and potting
IN **Muramoto, Hiroo**; Sato, Fumio; Takahashi, Eiji; Nakamura, Shigeru
PA **Nippon Soda Co., Ltd., Japan**
SO Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01056706	A	19890303	JP 1987-213898	19870827 <--
PRAI	JP 1987-213898		19870827 <--		

AB Resins (m.p. ≥35°) giving cured products with good processability and adhesion and low shrinkage are prepared from carboxylated butadiene-vinylarom. compound copolymers (number-average mol. weight 500-20,000; vinyl microstructure ≥50%) and epoxy allyl ethers, glycidyl (meth)acrylate, and/or polyepoxide (meth)acrylates. A CO2H-terminated 61.2:38.8 butadiene-styrene copolymer (mol. weight ≥200; vinyl microstructure 90.3%, m.p. 58°) was diluted with 20 phr styrene and

30 phr 2-hydroxyethyl methacrylate and mixed with 2 phr dicumyl peroxide to give an adhesive which, when cured, showed 5.1% shrinkage, tensile shear strength 155 kg/cm2, and peel strength 3.8 kg/25 mm.

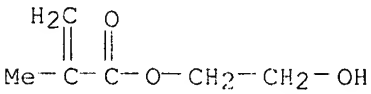
IT **121913-09-5**, Butadiene-2-hydroxyethyl methacrylate-α-methylstyrene-styrene graft copolymer **121961-18-0**, Butadiene-2-hydroxyethyl methacrylate-styrene graft copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, with high shear strength and low shrinkage)

RN 121913-09-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1,3-butadiene, ethenylbenzene and (1-methylethenyl)benzene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9
CMF C6 H10 O3



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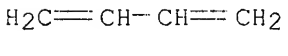
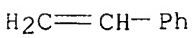
CRN 106-99-0
CMF C4 H6



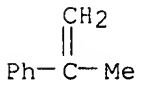
CM 3

CRN 100-42-5
CMF C8 H8



CM 4

CRN 98-83-9
CMF C9 H10

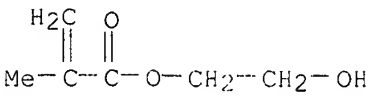


RN 121961-18-0 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with 1,3-butadiene and ethenylbenzene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9
CMF C6 H10 O3



CM 2

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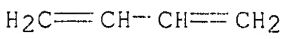
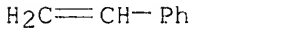


CM 3

CRN 100-42-5
CMF C8 H8



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FILE 'REGISTRY' ENTERED AT 13:58:36 ON 16 APR 2008
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DICTIONARY FILE UPDATES: 15 APR 2008 HIGHEST RN 1015083-77-8

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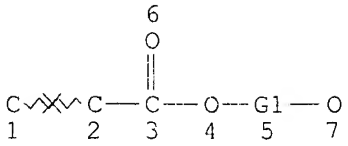


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DEFAULT ECLEVEL IS LIMITED

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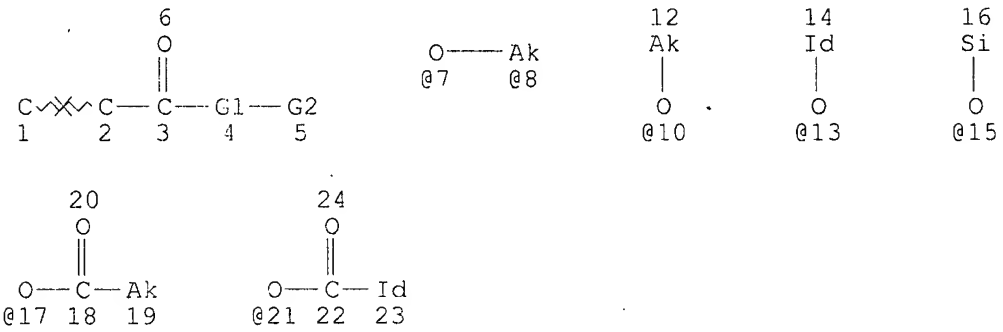


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DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
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NUMBER OF NODES IS  22

STEREO ATTRIBUTES: NONE
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L48              STR
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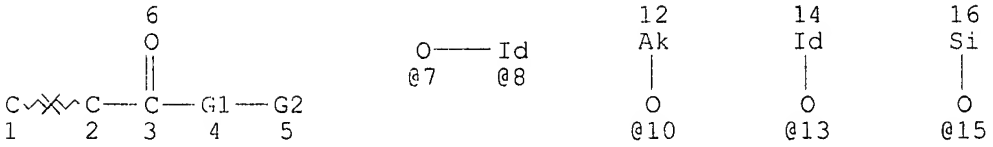
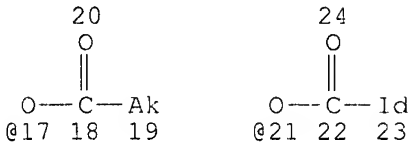
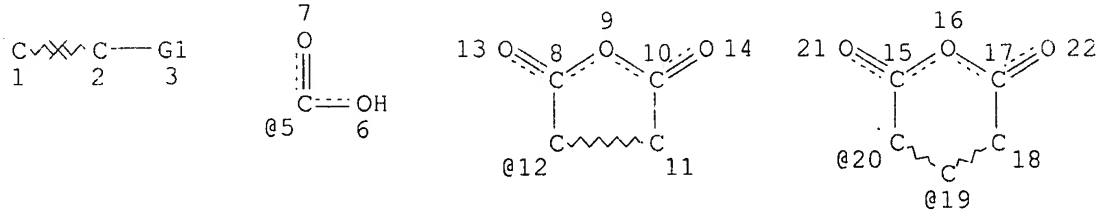


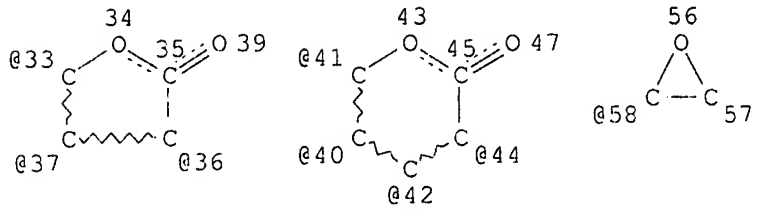


REP G1=(1-20) 7-3 8-5
VAR G2=OH/10/13/17/21/15
NODE ATTRIBUTES:
CONNECT IS M1 RC AT 1
CONNECT IS M1 RC AT 2
CONNECT IS M1 RC AT 16
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE
L50 1394 SEA FILE=REGISTRY SUB=L44 CSS FUL L48
L51 120715 SEA FILE=REGISTRY ABB=ON PLU=ON (L47 OR L50)
L52 8186 SEA FILE=REGISTRY ABB=ON PLU=ON L44 AND (C2H4O OR C3H6O OR C4H8O) NOT L51
L53 2793 SEA FILE=REGISTRY ABB=ON PLU=ON L44 AND C3H6O AND C2H4O
L54 438 SEA FILE=REGISTRY ABB=ON PLU=ON L44 AND C3H6O AND C4H8O
L55 835 SEA FILE=REGISTRY ABB=ON PLU=ON L44 AND C2H4O AND C4H8O
L56 2987 SEA FILE=REGISTRY ABB=ON PLU=ON (L53 OR L54 OR L55) NOT L52
L57 120715 SEA FILE=REGISTRY ABB=ON PLU=ON (L56 OR L51)
L58 STR



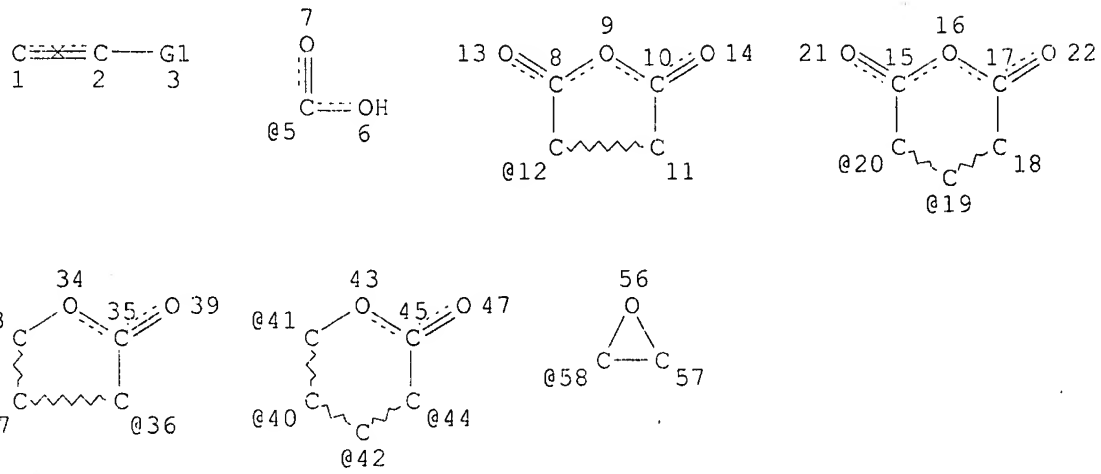


VAR G1=OH/5/58/NH2/12/20/19/33/37/36/41/40/42/44
NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 8 20 33 41 56
NUMBER OF NODES IS 37

STEREO ATTRIBUTES: NONE
L60 93973 SEA FILE=REGISTRY SUB=L57 SSS FUL L58
L73 STR



VAR G1=OH/5/58/NH2/12/20/19/33/37/36/41/40/42/44
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 8 20 33 41 56
NUMBER OF NODES IS 37

STEREO ATTRIBUTES: NONE
L75 46979 SEA FILE=REGISTRY SUB=L60 SSS FUL L73

100.0% PROCESSED 93973 ITERATIONS 46979 ANSWERS
SEARCH TIME: 00.00.02

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:58:52 ON 16 APR 2008
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FILE COVERS 1907 - 16 Apr 2008 VOL 148 ISS 16
FILE LAST UPDATED: 15 Apr 2008 (20080415/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l124 bib abs hitind hitstr retable tot

L124 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:752771 HCAPLUS
DN 139:263301
TI Binder resin for **battery electrode** in secondary lithium **battery**
IN Nakazawa, Satoshi; Mashimo, Kiyotaka; Suzuki, Kenji; Sonobe, Hiroyuki; Haba, Eisuke
PA Hitachi Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003268053	A	20030925	JP 2002-69058	20020313 <--
PRAI JP 2002-69058		20020313 <--		

AB The resin containing CO2H is obtained by copolymg. acrylic acid and/or methacrylic acid 10-95, CH2:CR1CO2(R2O)nR3 (n ≥ 1; R1 = H, Me; R2 = C1-4 alkylene; R3 = H, C1-20 alkyl) 1-50, and comonomers 0-89 weight% and has acid value 70-750 KOHmg/g. The **electrode** using the binder resin has high flexibility and **electrolyte** resistance and gives a long-life **battery**.
IC ICM C08F0290-06
ICS C08F0220-06; C08F0220-28; **H01M0004-02**; **H01M0004-58**; **H01M0004-62**; **H01M0010-40**
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST lithium **battery electrode** binder acrylic acid polymer; methacrylic acid polymer binder **electrode** lithium **battery**; polyoxyalkylene graft acrylic polymer binder **electrode battery**
IT Polyoxyalkylenes, uses
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, graft; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)
IT **Battery electrodes**
Binders
(carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)
IT **Secondary batteries**
(lithium; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

IT 7440-44-0, Carbon, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(amorphous, **anode**; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

IT 7782-42-5, Graphite, uses
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**anode**; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

IT **109326-78-5P**, Acrylic acid-polyethylene glycol monoacrylate graft copolymer **109327-03-9P 109327-05-1P 474937-06-9P** 601496-96-2P 602299-96-7P
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

IT 39300-70-4, Lithium nickel oxide 52627-24-4, Cobalt lithium oxide 176979-24-1, Lithium manganese oxide (Li1.12Mn1.88O4) 312636-38-7, Lithium manganese oxide (Li0.2-2.5Mn0.8-1.25O2)
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**cathode**; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

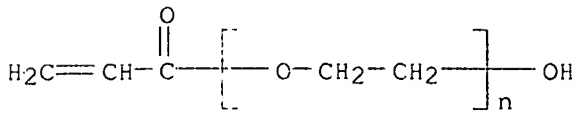
IT 112344-11-3P, Acrylic acid-ethylene oxide graft copolymer 152522-69-5P, Acrylic acid-propylene oxide graft copolymer
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(comprised of actual and assumed monomers; carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

IT **109326-78-5P**, Acrylic acid-polyethylene glycol monoacrylate graft copolymer **109327-03-9P 109327-05-1P 474937-06-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(carboxy-containing acrylic polyoxyalkylene polymer binder with high flexibility and **electrolyte** resistance for **electrode** in Li **battery**)

RN 109326-78-5 HCAPLUS
CN 2-Propenoic acid, polymer with α-(1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

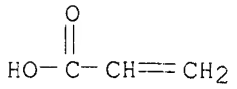
CM 1

CRN 26403-58-7
CMF (C2 H4 O)n C3 H4 O2
CCI PMS



CM 2

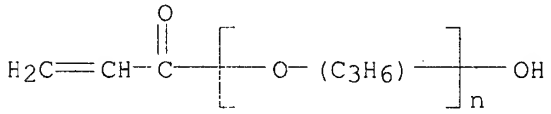
CRN 79-10-7
CMF C3 H4 O2



RN 109327-03-9 HCAPLUS
CN 2-Propenoic acid, polymer with α-(1-oxo-2-propenyl)-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)], graft (9CI) (CA INDEX NAME)

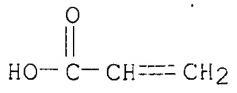
CM 1

CRN 50858-51-0
CMF (C3 H6 O)n C3 H4 O2
CCI IDS, PMS



CM 2

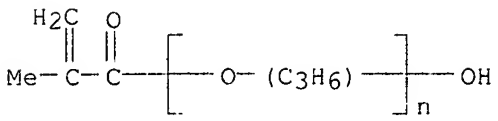
CRN 79-10-7
CMF C3 H4 O2



RN 109327-05-1 HCAPLUS
CN 2-Propenoic acid, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)], graft (9CI) (CA INDEX NAME)

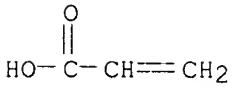
CM 1

CRN 39420-45-6
CMF (C3 H6 O)n C4 H6 O2
CCI IDS, PMS



CM 2

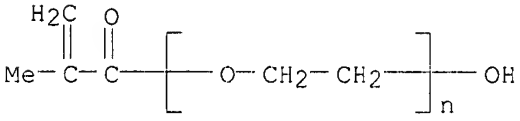
CRN 79-10-7
CMF C3 H4 O2



RN 474937-06-9 HCAPLUS
CN 2-Propenoic acid, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

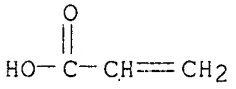
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 79-10-7
CMF C3 H4 O2



L124 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:85610 HCAPLUS
DN 138:321995
TI Synthesis and properties of low-molecular-weight polymer **electrolyte**
AU Qi, Li; Ouyang, Wu-ye; Dong, Shao-jun
CS Changchun Institute of Applied Chemistry, State Key Laboratory of Electroanalytical Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China
SO Gongneng Gaofenzi Xuebao (**2002**), 15(4), 430-436
CODEN: GGXUEH; ISSN: 1004-9843
PB Gongneng Gaofenzi Xuebao Bianjibu
DT Journal
LA Chinese
AB The pectination polymer **electrolyte** was designed and synthesized, which is especially suitable for characterization by ultramicro-**electrode**. According to design, first, methacrylic acid poly(ethylene glycol) Me ether esters of different mol. weight were prepared Further, comblike polymer **electrolyte** whose average .hivin.Mw was

about 10 000 was synthesized. The results indicated that reaction followed the reaction equation strictly. Refined product was an amorphous comblike polymer. It has two glass transition temps., one is host-chain's (about 100°C), the other is side-chain' s(under -20°C). The side-chain can move under room temperature, which help to transfer and expand of electroactive material. This low mol. weight polymer **electrolyte** can be studied by ultramicro - **electrode.**

CC 37-5 (Plastics Manufacture and Processing)

ST polyethylene glycol graft polymer **electrolyte** thermal elec property

IT Polyoxyalkylenes, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(acrylate-terminated, polymers, macromer; synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT Polyoxyalkylenes, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(acrylic, graft; synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT Diffusion
(of ferrocene in low-mol.-weight polymer **electrolyte**)

IT Acrylic polymers, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(polyoxyalkylene-, graft; synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT Polymer chains
(side; effect on properties of low-mol.-weight polymer **electrolyte**)

IT Electric conductivity
Glass transition temperature
Polymer chains
Polymer electrolytes
Thermal stability
(synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT 26915-72-0P, Polyethylene glycol methacrylate methyl ether
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(macromer; synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT 102-54-5, Ferrocene
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT 7439-93-2D, Lithium, polyethylene glycol graft copolymer complexes, perchlorate-containing **207973-61-3D**, lithium complexes, perchlorate-containing 314065-74-2D, Acrylic acid-ethylene oxide graft copolymer methyl ether, lithium complexes, perchlorate-containing
RL: PRP (Properties)
(synthesis and properties of low-mol.-weight polymer **electrolyte**)

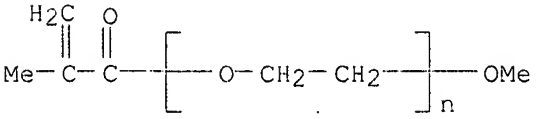
IT **207973-61-3P** 314065-74-2P, Acrylic acid-ethylene oxide graft copolymer methyl ether
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and properties of low-mol.-weight polymer **electrolyte**)

IT **207973-61-3D**, lithium complexes, perchlorate-containing
RL: PRP (Properties)
(synthesis and properties of low-mol.-weight polymer **electrolyte**

)
RN 207973-61-3 HCAPLUS
CN 2-Propenoic acid, polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxypoly(oxy-1,2-ethanediyl), graft (CA INDEX NAME)

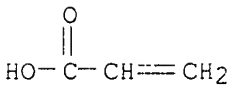
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 79-10-7
CMF C3 H4 O2



RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis and properties of low-mol.-wt. polymer **electrolyte**

L124 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:848352 HCAPLUS
DN 137:344917
TI Composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor
IN Yamashita, Atsushi; Fukuda, Takeshi; Watanabe, Kimihiro
PA Toyo Rubber Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

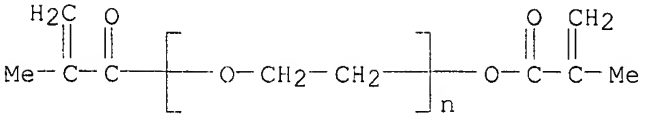
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002324734	A	20021108	JP 2001-127951	20010425 <--
PRAI JP 2001-127951		20010425 <--		

AB The title composition comprises a polymerizing monomer, **electrolyte**, and radical-polymerization initiator having a 10-h half-lifetime temperature 50 - 170 °C. A method for fabricating a gel **electrolyte** involves impregnating an **electrode** of an aluminum **electrolytic** capacitor with the above composition and heating at 50 - 170 °C. A thermally stable gel **electrolyte** having a high ionic conductivity is obtained.
IC ICM H01G0009-035
ICS C08F0002-44; H01G0009-00

CC 76-10 (Electric Phenomena)
ST aluminum **electrolytic** capacitor gel polymer **electrolyte** radical polymn initiator
IT **Electrolytic** capacitors
Polymer electrolytes
(radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
IT Polymerization
Polymerization catalysts
(radical; radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
IT 78-67-1 94-36-0, Benzoyl peroxide, uses 614-45-9, Perbutyl Z
RL: CAT (Catalyst use); USES (Uses)
(radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
IT 7429-90-5, Aluminum, uses
RL: DEV (Device component use); USES (Uses)
(radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
IT 37281-56-4P, Blemmer PE-200-Light Ester 9EG copolymer **86944-80-1P**, Light Ester 9EG-methacrylic acid copolymer 108927-94-2P, Blemmer PDE-400-Blemmer PME-400 copolymer 428876-95-3P, Butyl methacrylate-Light Ester 9EG-Light Ester 130MA copolymer 443680-26-0P, Blemmer PE 200-Light Ester TMP copolymer 473926-40-8P, Blemmer PE 200-Light Ester G 101P copolymer
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
IT **86944-80-1P**, Light Ester 9EG-methacrylic acid copolymer
RL: DEV (Device component use); PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(radical-polymerization initiator of composition for forming gel **electrolyte** for aluminum **electrolytic** capacitor and fabrication of gel **electrolyte** for aluminum **electrolytic** capacitor by radical polymerization)
RN 86944-80-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-[(2-methyl-1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl) (CA INDEX NAME)

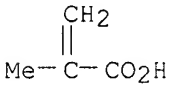
CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS



CM 2

CRN 79-41-4
CMF C4 H6 O2



L124 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1986:534516 HCAPLUS
DN 105:134516
OREF 105:21723a,21726a
TI Polymeric ionic conductors
IN Kobayashi, Norihisa; Uchiyama, Masahiro; Tsuchida, Hidetoshi
PA Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

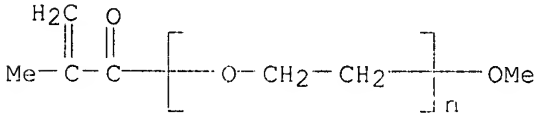
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 61047713	A	19860308	JP 1984-168820	19840814 <--
PRAI JP 1984-168820		19840814 <--		

AB A polymeric ionic conductor forming flexible films and useful in solid-**electrolyte batteries** and electrochromic display devices comprises 1-40 mol% (meth)acrylic acid (or its Li, Na, or K salt) and 60-99 mol% polyethylene glycol (d. p. 3-20) mono(meth)acrylate. Thus, a mixture of 0.5 g polyethylene glycol (d.p. 5) Me ether methacrylate (I) (mol. weight 250) and 0.05 g Li methacrylate in 5 mL MeOH containing AIBN (in an amount of 1 mol/mol-I) was cast on a Teflon plate and polymerized at 100° for 24 h under reduced pressure to give a 0.13-mm polymeric film (mol. weight 53,000) exhibiting ionic conductivity 1.1 + 10-7 S/cm.
IC ICM C08F0220-28
ICI C08F0220-28, C08F0220-06
CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 72, 76
ST polyethylene glycol methacrylate copolymer; lithium methacrylate copolymer ionic conductor; solid **electrolyte battery** polymeric conductor; electrochromic display device polymeric conductor
IT Electric conductors
(ionic, methacrylic acid (salt)-polyethylene glycol (meth)acrylate copolymers as, film-formable, for solid-**electrolyte batteries** or electrochromic display devices)
IT **Batteries, secondary**
(solid-**electrolyte**, methacrylic acid (salt)-polyethylene glycol (meth)acrylate copolymers for)

IT **87228-08-8** 95410-90-5 102814-54-0 104491-11-4 104491-12-5
104491-13-6 104491-14-7 104491-16-9
RL: USES (Uses)
(films, ionic conductive, for solid-**electrolyte**
batteries or electrochromic display apparatus)
IT **87228-08-8**
RL: USES (Uses)
(films, ionic conductive, for solid-**electrolyte**
batteries or electrochromic display apparatus)
RN 87228-08-8 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

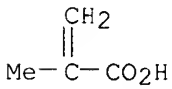
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 79-41-4
CMF C4 H6 O2



=> => d bib abs hitind hitstr tot

L189 ANSWER 1 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2004:739448 HCAPLUS
DN 141:269978
TI Solid **electrolytic capacitor**
IN Honda, Kazumitsu; Takaoka, Ryoko; Tsubaki, Yuichiro; Watanabe, Yoshihiro
PA Matsushita Electric Industrial Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004253537	A	20040909	JP 2003-41108	20030219 <--
PRAI JP 2003-41108		20030219 <--		

AB A solid **electrolytic capacitor** having superior

impedance, ESR, and withstand-voltage properties comprises an anode of a valve metal having a **dielec.** oxide film, a cathode facing the anode, and a solid **polymer electrolyte** of an ion-**conductive electrolyte** in a matrix of a acrylate copolymer and an electron-**conductive electrolyte.** Specifically, the valve metal may comprise Al, Ta, or Nb, and the electron-**conductive electrolyte** may comprise polypyrrole, polythiophene, polyaniline, polyethylenedioxythiophene, and/or sulfonated polyaniline.

IC ICM H01G0009-035
ICS H01G0009-14

CC 76-10 (Electric Phenomena)

ST solid **electrolytic capacitor polymer electrolyte**

IT **Electrolytic capacitors**
Polymer electrolytes
(**polymer electrolyte** of solid **electrolytic capacitor**)

IT Polyanilines
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**polymer electrolyte** of solid **electrolytic capacitor**)

IT 7429-90-5, Aluminum, uses 7440-03-1, Niobium, uses 7440-25-7, Tantalum, uses
RL: DEV (Device component use); USES (Uses)
(**polymer electrolyte** of solid **electrolytic capacitor**)

IT 79-10-7D, Acrylic acid, esters, **polymers** 1709-72-4D, C1-5-alkyl derivs., polymers with acrylic acid esters 1709-72-4D, polymers with acrylic acid esters 1863-63-4, Ammonium benzoate 3385-41-9, Di-ammonium adipate 4986-89-4D, C1-5-alkyl derivs.,polymers with acrylic acid esters 4986-89-4D, polymers with acrylic acid esters 9041-78-5D, polymers with C1-5-alkylacrylates and methacrylate diesters 10095-20-2D, C1-5-alkyl derivs. polymers with acrylic acid esters and polyethylene glycol dimethacrylates 25233-34-5, Polythiophene 25852-47-5D, polymers with propanetriol C1-5-alkylacrylates 27522-09-4, Ammonium borate 30604-81-0, Polypyrrole 37281-56-4 38719-13-0 45314-30-5D, copolymers with propanetriol acrylates and phosphonoethylene glycol C1-5-alkylacrylates 51877-43-1, Ammonium sebacate 67037-15-4, uses 79723-02-7, uses 82169-85-5, Ammonium azelate 94108-97-1D, C1-5-alkyl derivs., polymers with propanetriol acrylates and propanetriol C1-5-alkylacrylates 94108-97-1D, polymers with propanetriol C1-5-alkylacrylates 114480-39-6 120226-84-8, uses 126213-51-2, Polyethylenedioxythiophene 129710-09-4, uses 167552-54-7, uses 183386-04-1 220208-63-9 485828-99-7 753028-70-5 753028-71-6 753028-72-7 753028-73-8 753028-74-9 **753451-52-4** 753451-57-9
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(**polymer electrolyte** of solid **electrolytic capacitor**)

IT 25233-30-1, Polyaniline
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(sulfonated; **polymer electrolyte** of solid **electrolytic capacitor**)

IT **753451-52-4**
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

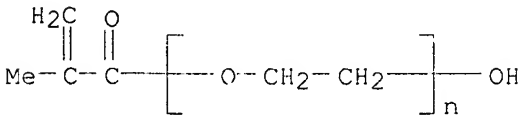
(**polymer electrolyte** of solid **electrolytic capacitor**)

RN 753451-52-4 HCAPLUS

CN Oxirane, ethyl-, polymer with oxirane, bis(2-methylenepentanoate), polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS

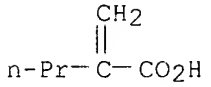


CM 2

CRN 753451-51-3
CMF C6 H10 O2 . 1/2 (C4 H8 O . C2 H4 O)x

CM 3

CRN 5650-75-9
CMF C6 H10 O2

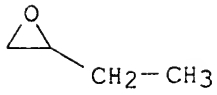


CM 4

CRN 27517-34-6
CMF (C4 H8 O . C2 H4 O)x
CCI PMS

CM 5

CRN 106-88-7
CMF C4 H8 O



CM 6

CRN 75-21-8
CMF C2 H4 O

L189 ANSWER 2 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:317760 HCAPLUS
DN 138:341090
TI **Polymer** gel **electrolyte** composition and its manufacture
IN Maruyama, Kunio; Miyagawa, Shinji; Yamaguchi, Shuichiro; Koyama, Noboru
PA Shirouma Science Co., Ltd., Japan; Fuji Heavy Industries Ltd.; Chemipro Kasei Ltd.; Mitsui and Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003123842	A	20030425	JP 2001-322319	20011019 <--
JP 3974371	B2	20070912		
WO 2003036656	A1	20030501	WO 2002-JP10746	20021016 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002363048	A1	20030506	AU 2002-363048	20021016 <--
TW 593498	B	20040621	TW 2002-91124118	20021018 <--
US 20040197662	A1	20041007	US 2004-828468	20040419 <--
US 7285360	B2	20071023		
PRAI JP 2001-322319	A	20011019 <--		
WO 2002-JP10746	W	20021016 <--		

AB The **electrolyte** composition, useful for electrochem. devices, has a 3-dimensional crosslinked structure of a crosslinked polymer network matrix in a mixed nonaq. solvent **electrolyte** solution, and a non-crosslinked polymer contained in the matrix; where the non-crosslinked polymer contains an ethylene unit and/or an propylene unit, and an unsatd. carboxylic acid obtained by esterizing a carboxyl group with a polyalkylene glycol protected by a hydroxyl group at its one end. The **electrolyte** composition is manufactured by dissolving the non-crosslinked polymer in the mixed nonaq. solvent **electrolyte** solution, adding a crosslinkable monomer to the mixture; and polymerizing the monomer with the mixture
IC ICM **H01M0010-40**
ICS C08G0081-02; C08L0023-26; C08L0101-02; H01B0001-06; H01G0009-025; H01G0009-032
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST **battery polymer** gel **electrolyte** compn manuf
IT **Battery electrolytes**
Polymer electrolytes
(compns. and manufacture of **polymer** gel **electrolytes** for

electrochem. devices)

IT **518044-75-2P**, Acrylic acid-ethylene copolymer, ester with polyethylene glycol monomethyl ether, polymer with polyethylene glycol diacrylate **518044-77-4P**, Ethylene-methacrylic acid copolymer, ester with ethylene glycol monoethyl ether, polymer with polyethylene glycol diacrylate 518044-79-6P, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with N-methylol methacrylamide **518044-81-0P**, Ethylene-methacrylic acid copolymer, ester with ethylene glycol monoethyl ether, polymer with 3-hydroxyethyl methacrylate 518044-82-1P, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with glycidyl acrylate 518044-83-2P, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with 4,4'-diphenyl diisocyanate 518044-84-3P, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with triphenyl methane triisocyanate **518044-86-5P**, Ethylene-mathacrylic acid-propylene copolymer, ester with ethylene glycol monomethyl ether, polymer with polyethylene glycol diacrylate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(compns. and manufacture of **polymer** gel **electrolytes** for electrochem. devices)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 111-46-6, Diethylene glycol, uses 616-38-6, Dimethyl carbonate 623-53-0, Methyl ethyl carbonate 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate **518044-78-5**, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with 1,6-hexanediol dimethacrylate
RL: TEM (Technical or engineered material use); USES (Uses)
(compns. and manufacture of **polymer** gel **electrolytes** for electrochem. devices)

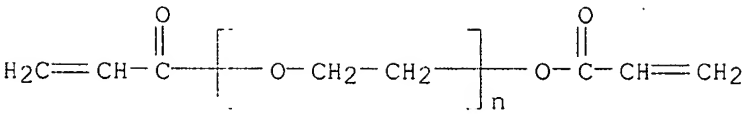
IT **518044-75-2P**, Acrylic acid-ethylene copolymer, ester with polyethylene glycol monomethyl ether, polymer with polyethylene glycol diacrylate **518044-77-4P**, Ethylene-methacrylic acid copolymer, ester with ethylene glycol monoethyl ether, polymer with polyethylene glycol diacrylate **518044-81-0P**, Ethylene-methacrylic acid copolymer, ester with ethylene glycol monoethyl ether, polymer with 3-hydroxyethyl methacrylate **518044-86-5P**, Ethylene-mathacrylic acid-propylene copolymer, ester with ethylene glycol monomethyl ether, polymer with polyethylene glycol diacrylate
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(compns. and manufacture of **polymer** gel **electrolytes** for electrochem. devices)

RN 518044-75-2 HCAPLUS

CN 2-Propenoic acid, polymer with ethene, ester with α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl), graft, polymer with α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS

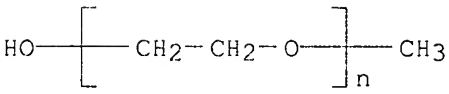


CM 2

CRN 177569-35-6
CMF (C3 H4 O2 . C2 H4)x . x (C2 H4 O)n C H4 O

CM 3

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS

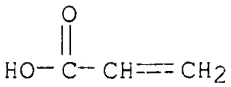


CM 4

CRN 9010-77-9
CMF (C3 H4 O2 . C2 H4)x
CCI PMS

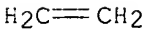
CM 5

CRN 79-10-7
CMF C3 H4 O2



CM 6

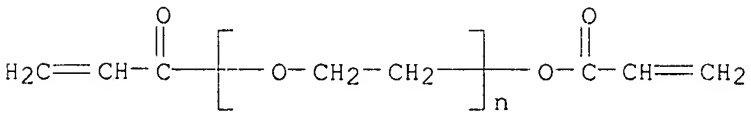
CRN 74-85-1
CMF C2 H4



RN 518044-77-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with ethene, ester with α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl), graft, polymer with α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS

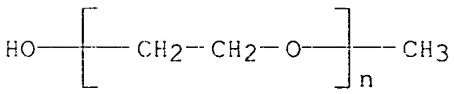


CM 2

CRN 518044-76-3
CMF (C4 H6 O2 . C2 H4)x . x (C2 H4 O)n C H4 O

CM 3

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS

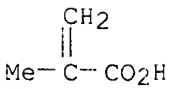


CM 4

CRN 25053-53-6
CMF (C4 H6 O2 . C2 H4)x
CCI PMS

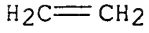
CM 5

CRN 79-41-4
CMF C4 H6 O2



CM 6

CRN 74-85-1
CMF C2 H4

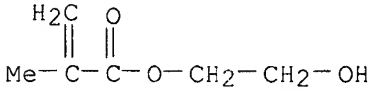


RN 518044-81-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with ethene, ester with

α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl), graft, polymer
with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 868-77-9
CMF C6 H10 O3

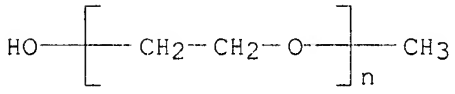


CM 2

CRN 518044-76-3
CMF (C4 H6 O2 . C2 H4)x . x (C2 H4 O)n C H4 O

CM 3

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS

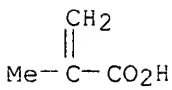


CM 4

CRN 25053-53-6
CMF (C4 H6 O2 . C2 H4)x
CCI PMS

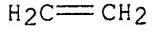
CM 5

CRN 79-41-4
CMF C4 H6 O2



CM 6

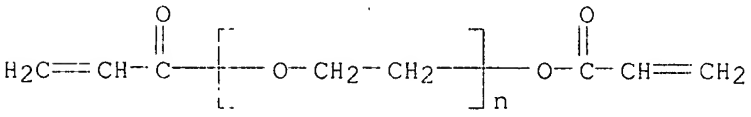
CRN 74-85-1
CMF C2 H4



RN 518044-86-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with ethene and propene, ester with α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl), graft, polymer with α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS

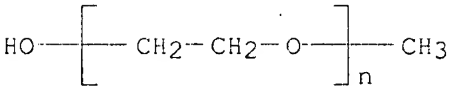


CM 2

CRN 518044-85-4
CMF (C4 H6 O2 . C3 H6 . C2 H4)x . x (C2 H4 O)n C H4 O

CM 3

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS

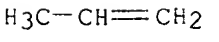


CM 4

CRN 28433-68-3
CMF (C4 H6 O2 . C3 H6 . C2 H4)x
CCI PMS

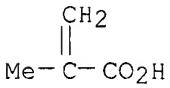
CM 5

CRN 115-07-1
CMF C3 H6



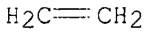
CM 6

CRN 79-41-4
CMF C4 H6 O2



CM 7

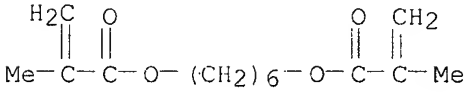
CRN 74-85-1
CMF C2 H4



IT **518044-78-5**, Acrylic acid-ethylene copolymer, ester with ethylene glycol monomethyl ether, polymer with 1,6-hexanediol dimethacrylate
RL: TEM (Technical or engineered material use); USES (Uses)
(compns. and manufacture of **polymer** gel **electrolytes** for electrochem. devices)
RN 518044-78-5 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester, polymer with ethene graft polymer with 2-propenoic acid ester with α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 6606-59-3
CMF C14 H22 O4

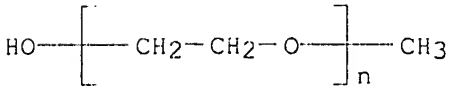


CM 2

CRN 177569-35-6
CMF (C3 H4 O2 . C2 H4)x . x (C2 H4 O)n C H4 O

CM 3

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS

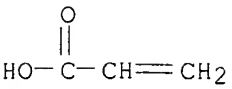


CM 4

CRN 9010-77-9
CMF (C3 H4 O2 . C2 H4)x
CCI PMS

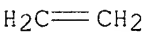
CM 5

CRN 79-10-7
CMF C3 H4 O2



CM 6

CRN 74-85-1
CMF C2 H4



L189 ANSWER 3 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **2003:260029** HCAPLUS
DN **138:274071**
TI Hydrophilic gel-containing separator for **battery** and capacitor and its manufacture
IN Fukuda, Takeshi; Mimura, Yoshio
PA Toyo Rubber Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003100277	A	20030404	JP 2001-286551	20010920 <--
PRAI JP 2001-286551		20010920 <--		

AB The separator has a porous substrate supporting hydrophilic gels and is manufactured by polymerizing hydrophilic monomers [e.g., (meth)acrylic acid, (meth)acrylate salt, polyoxylalkylene polyol poly(meth)acrylate], mixing the resulting polymers with solvents to give a hydrophilic gel dispersion, coating and impregnating a porous substrate with the dispersion, and drying the substrate. The separator prevents leakage of **electrolytic** solns.
IC ICM **H01M0002-16**
ICS C08F0220-06; H01G0009-00; H01G0009-02; H01G0009-035; C08F0220-20
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
ST **battery** separator hydrophilic polymer gel porous substrate; capacitor separator hydrophilic polymer gel porous substrate
IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, gel; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)
IT **Primary battery separators**
Secondary battery separators
Separators

(hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

IT Paper
(kraft, separator substrate; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

IT Nonwoven fabrics
(separator substrate, WPSD 40C100; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

IT **Electrolytic** capacitors
(separators; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

IT **86417-17-6P**, Acrylic acid-polyethylene glycol diacrylate-potassium acrylate copolymer 503026-74-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gel; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

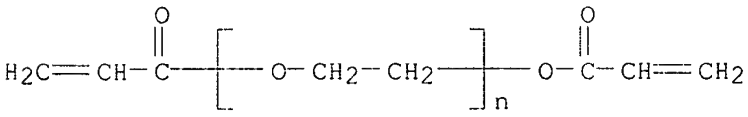
IT **86417-17-6P**, Acrylic acid-polyethylene glycol diacrylate-potassium acrylate copolymer
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(gel; hydrophilic gel-containing separator for **battery** and capacitor and its manufacture for leakage prevention)

RN 86417-17-6 HCAPLUS

CN 2-Propenoic acid, polymer with α-(1-oxo-2-propen-1-yl)-ω-[(1-oxo-2-propen-1-yl)oxy]poly(oxy-1,2-ethanediyl) and potassium 2-propenoate (1:1) (CA INDEX NAME)

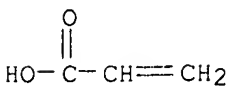
CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS



CM 2

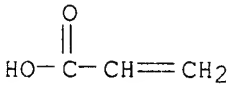
CRN 10192-85-5
CMF C3 H4 O2 . K



● K

CM 3

CRN 79-10-7
CMF C3 H4 O2



L189 ANSWER 4 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2003:211267 HCAPLUS
DN 138:404166
TI Single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**
AU Ryu, Sang-Woog; Trapa, Patrick E.; Sadoway, Donald R.; Mayes, Anne M.
CS Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (**2003**), 44(1), 1087-1088
CODEN: ACPPAY; ISSN: 0032-3934
PB American Chemical Society, Division of Polymer Chemistry
DT Journal; (computer optical disk)
LA English
AB Solid **polymer electrolytes** based on lithium salt-solvating poly(ethylene oxide), PEO, are favored candidates for rechargeable lithium **batteries**. The low T, poly(oligo oxyethylene methacrylate), POEM, results in the creation of nanoscale liquid pathways for lithium ion **conduction**. A series of block copolymers consisting of POEM, poly(lithium methacrylate), PLiMA, and poly(lauryl methacrylate), PLMA, were synthesized to investigate how mol. architecture, and particularly the block placement of the anions, influences **conductivity** in self-doped block **copolymer electrolytes**. The ionic **conductivity** in nearly 2 orders of magnitude higher when the LiMA is confined to a rubbery, alkyl ester block (random copolymer segment with lauryl methacrylate) or as a central homo polymeric block compared to when it is in a copolymeric block with the POEM.
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 35, 38
ST ion **cond** block **copolymer polyelectrolyte** solid lithium rechargeable **battery**
IT Polymerization
(anionic, living; single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)
IT **Secondary batteries**
(lithium; single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)
IT Hydrolysis
(of tert- Bu ester groups to carboxylic acids; single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)
IT **Battery electrolytes**
Ionic **conductivity**
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)
IT 75-77-4, reactions 7681-82-5, Sodium iodide, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(for hydrolysis; single-ion block **copolymer**

electrolytes for solid-state lithium rechargeable **batteries**)

IT 865-34-9, Lithium methoxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(form lithium salt of the pre-hydrolyzed tert-Bu ester groups; single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

IT 598-30-1, sec-Butyllithium 3462-81-5, 1,1-Diphenylhexyllithium 7447-41-8, Lithium chloride (LiCl), uses
RL: CAT (Catalyst use); USES (Uses)
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

IT 25719-52-2P, Poly(lauryl methacrylate) 528875-84-5P, Lauryl methacrylate-tert-butyl methacrylate block copolymer 528875-86-7P, Lauryl methacrylate-tert-butyl methacrylate-poly(oligo oxyethylene) methacrylate block copolymer
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

IT **374591-39-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

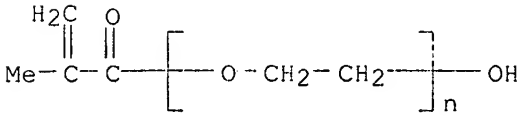
IT 142-90-5, Lauryl methacrylate 585-07-9, tert-Butyl methacrylate 87105-87-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

IT **374591-39-6P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(single-ion block **copolymer electrolytes** for solid-state lithium rechargeable **batteries**)

RN 374591-39-6 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with lithium 2-methyl-2-propenoate and α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

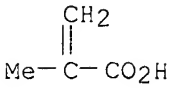
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

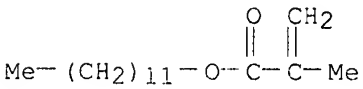
CRN 13234-23-6
CMF C4 H6 O2 . Li



Li

CM 3

CRN 142-90-5
CMF C16 H30 O2



RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L189 ANSWER 5 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:256668 HCAPLUS
DN 136:297384
TI Secondary lithium **battery**
IN Sada, Tsutomu; Takeda, Kazunari; Yokota, Yumiko; Nishimura, Naoto; Mitate, Takehito; Yamada, Kazuo; Nishijima, Motoaki; Torata, Naoto
PA Pionics Co., Ltd., Japan; Sharp Corp.
SO PCT Int. Appl., 23 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002027858	A1	20020404	WO 2001-JP8526	20010928 <--
	W: CN, IN, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2002110244	A	20020412	JP 2000-297772	20000929 <--
	TW 518795	B	20030121	TW 2001-90123997	20010927 <--
	KR 772566	B1	20071102	KR 2003-704253	20030324 <--
	US 20040029009	A1	20040212	US 2003-381515	20030812 <--
PRAI	JP 2000-297772	A	20000929 <--		
	WO 2001-JP8526	W	20010928 <--		

AB The **battery** has a Li intercalating anode, a Li containing chalcogenide cathode, and a solid **electrolyte** between and bonded to the electrodes; where the **electrolyte** has lower d.c. resistance on the cathode side than the anode side. The solid **electrolyte** is preferably a **polymer electrolyte** , with a higher Li salt concentration and /or a higher Li salt solution content on the cathode side than the anode side.
IC ICM **H01M0010-40**
ICS **H01M0004-58**; **H01M0004-02**
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST secondary **battery polymer electrolyte** lithium salt distribution; resistance grade **polymer electrolyte** secondary lithium **battery**

IT **Battery electrolytes**
(**polymer electrolytes** with lower d.c. resistance on cathode side than anode side in secondary lithium **batteries**)

IT 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 14283-07-9, Lithium fluoroborate 21324-40-3, Lithium hexafluorophosphate 258327-46-7 **406720-90-9** **406909-87-3**
RL: DEV (Device component use); USES (Uses)
(**polymer electrolytes** with lower d.c. resistance on cathode side than anode side in secondary lithium **batteries**)

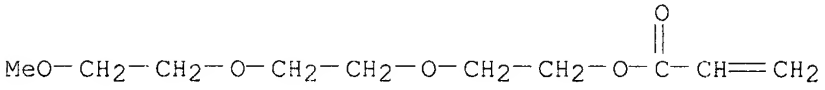
IT **406720-90-9** **406909-87-3**
RL: DEV (Device component use); USES (Uses)
(**polymer electrolytes** with lower d.c. resistance on cathode side than anode side in secondary lithium **batteries**)

RN 406720-90-9 HCAPLUS

CN 2-Propenoic acid, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester, polymer with methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1) tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7
CMF C10 H18 O5

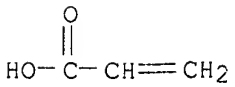


CM 2

CRN 111804-95-6
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

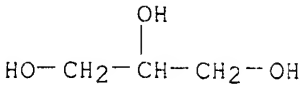
CM 3

CRN 79-10-7
CMF C3 H4 O2



CM 4

CRN 56-81-5
CMF C3 H8 O3

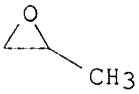


CM 5

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



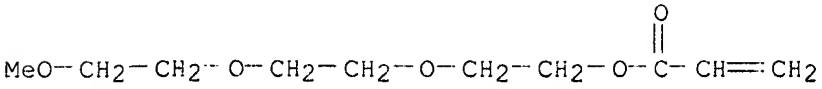
CM 7

CRN 75-21-8
CMF C2 H4 O

RN 406909-87-3 HCAPLUS
CN 2-Propenoic acid, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester, polymer with methyloxirane polymer with oxirane mono-2-propenoate methyl ether (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7
CMF C10 H18 O5



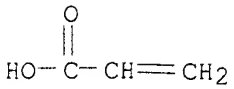
CM 2

CRN 52108-83-5
CMF (C3 H6 O . C2 H4 O)x . C3 H4 O2 . C H4 O

CM 3

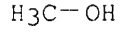
CRN 79-10-7

CMF C3 H4 O2



CM 4

CRN 67-56-1
CMF C H4 O

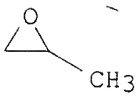


CM 5

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L189 ANSWER 6 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:256667 HCAPLUS
DN 136:281999
TI Manufacture of secondary lithium **battery**
IN Sada, Tsutomu; Takeda, Kazunari; Yokota, Yumiko; Nishimura, Naoto; Mitate, Takehito; Yamada, Kazuo; Nishijima, Motoaki; Torata, Naoto
PA Pionics Co., Ltd., Japan; Sharp Corp.
SO PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DT **Patent**

LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002027857	A1	20020404	WO 2001-JP8525	20010928 <--
	W: CN, IN, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2002110147	A	20020412	JP 2000-297771	20000929 <--
	TW 518789	B	20030121	TW 2001-90123996	20010927 <--
PRAI	JP 2000-297771	A	20000929 <--		

AB The **battery** is manufactured by preparing a Li intercalating carbonaceous anode and a Li containing chalcogenide cathode, impregnating the electrodes with a 1st mixture of an ion **conducting** polymer precursor and a nonaq. **electrolyte** solution, applying a 2nd nonaq. **electrolyte** solution mixture having a higher polymer precursor concentration on the impregnated electrodes, and polymerizing the precursors on the electrode to form **polymer electrolyte** layers bonded on the electrodes.

IC ICM **H01M0010-40**
ICS **H01M0004-02; H01M0004-58**

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST secondary lithium **battery polymer electrolyte** manuf; electrode bonded **polymer electrolyte** manuf lithium **battery**

IT **Battery electrolytes**
(manufacture of secondary lithium **batteries** with electrode bonded **polymer electrolyte** layers)

IT 258327-46-7P **406720-90-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of secondary lithium **batteries** with electrode bonded **polymer electrolyte** layers)

IT 96-48-0, γ-Butyrolactone 108-32-7, Propylene carbonate 623-53-0, Ethyl methyl carbonate 14283-07-9, Lithium fluoroborate
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process); USES (Uses)
(manufacture of secondary lithium **batteries** with electrode bonded **polymer electrolyte** layers)

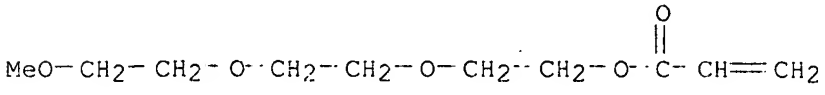
IT **406720-90-9P**
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(manufacture of secondary lithium **batteries** with electrode bonded **polymer electrolyte** layers)

RN 406720-90-9 HCAPLUS

CN 2-Propenoic acid, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester, polymer with methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1) tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7
CMF C10 H18 O5

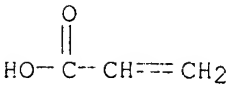


CM 2

CRN 111804-95-6
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

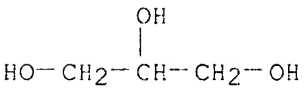
CM 3

CRN 79-10-7
CMF C3 H4 O2



CM 4

CRN 56-81-5
CMF C3 H8 O3

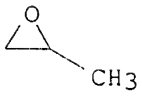


CM 5

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

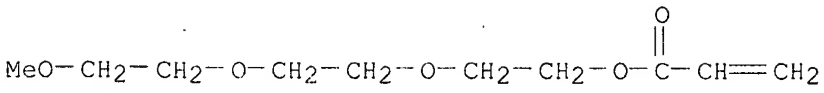
L189 ANSWER 7 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:256665 HCAPLUS
DN 136:281997
TI Secondary **polymer electrolyte** lithium **battery**
IN Sada, Tsutomu; Takeda, Kazunari; Yokota, Yumiko; Nishimura, Naoto; Mitate, Takehito; Yamada, Kazuo; Nishijima, Motoaki; Torata, Naoto
PA Sharp Corp., Japan
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002027855	A1	20020404	WO 2001-JP8523	20010928 <--
	W: CN, IN, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
	JP 2002110242	A	20020412	JP 2000-297762	20000929 <--
	TW 518794	B	20030121	TW 2001-90123994	20010927 <--
	KR 772563	B1	20071102	KR 2003-703923	20030318 <--
	US 20040048159	A1	20040311	US 2003-381885	20030903 <--
	US 7192675	B2	20070320		
PRAI	JP 2000-297762	A	20000929 <--		
	WO 2001-JP8523	W	20010928 <--		

AB The **battery** has a Li intercalating carbonaceous anode, a Li containing chalcogenide cathode, and a **polymer electrolyte** between the electrodes; where the **electrolyte** has an anode side layer and a cathode side layer bonded to resp. electrodes, and the 2 layers have different viscoelasticity.
IC ICM **H01M0010-40**
ICS **H01M0004-58; H01M0004-02**
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST secondary lithium **battery polymer electrolyte** viscoelasticity
IT **Battery electrolytes**
Viscoelasticity
(**polymer electrolyte** layers with different viscoelasticity bonded on cathodes and anodes in secondary lithium **batteries**)
IT 96-48-0, γ-Butyrolactone 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate 14283-07-9, Lithium fluoroborate 258327-46-7 **406720-90-9**
RL: DEV (Device component use); USES (Uses)
(**polymer electrolyte** layers with different viscoelasticity bonded on cathodes and anodes in secondary lithium **batteries**)
IT **406720-90-9**
RL: DEV (Device component use); USES (Uses)
(**polymer electrolyte** layers with different viscoelasticity bonded on cathodes and anodes in secondary lithium **batteries**)
RN 406720-90-9 HCAPLUS
CN 2-Propenoic acid, 2-[2-(2-methoxyethoxy)ethoxy]ethyl ester, polymer with methyloxirane polymer with oxirane ether with 1,2,3-propanetriol (3:1) tri-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7
CMF C10 H18 O5

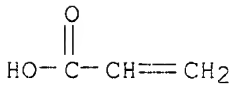


CM 2

CRN 111804-95-6
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x . 3 C3 H4 O2

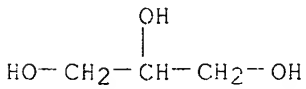
CM 3

CRN 79-10-7
CMF C3 H4 O2



CM 4

CRN 56-81-5
CMF C3 H8 O3

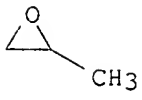


CM 5

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8

CMF C2 H4 O

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L189 ANSWER 8 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2001:796627 HCAPLUS
DN 135:346885
TI Manufacture of **polymer** solid **electrolytes** and **polymer batteries**
IN Mori, Tetsu; Yokojima, Minoru
PA Nippon Kayaku Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001307776	A	20011102	JP 2000-119182	20000420 <--
PRAI JP 2000-119182		20000420 <--		

AB The **polymer electrolytes** are prepared by mixing a plasticizer, an **electrolyte**, and thermal **polymerization** initiator with ≥2 of (meth)acrylic group containing polymers, oligomers, and monomers and hardening the mixture; where the hardening temperature is controlled above a temperature, where the initiator has a half life of 10 h.
IC ICM **H01M0010-40**
ICS C08F0290-00; C08J0005-18; C08K0003-10; C08K0005-00; C08K0005-17; C08K0005-50; C08L0101-06
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST **battery** acrylic **polymer electrolyte** manuf temp control
IT **Battery electrolytes**
(temperature control in manufacture of **polymer** solid **electrolytes** with thermal **polymerization** initiator for polymer **batteries**)
IT 108-32-7P, Propylene carbonate 7791-03-9P, Lithium perchlorate 28961-43-5P 139948-72-4P, Kayarad UX 3301 **371970-53-5P** 371970-54-6P
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)
(temperature control in manufacture of **polymer** solid **electrolytes** with thermal **polymerization** initiator for polymer **batteries**)
IT 94-36-0, Cadox b-ch50, uses
RL: NUU (Other use, unclassified); USES (Uses)
(temperature control in manufacture of **polymer** solid **electrolytes** with thermal **polymerization** initiator for polymer **batteries**)
IT **371970-53-5P**
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)

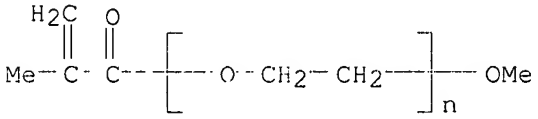
(temperature control in manufacture of **polymer** solid **electrolytes** with thermal **polymerization** initiator for polymer **batteries**)

RN 371970-53-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) and 2-propenoic acid (9CI) (CA INDEX NAME)

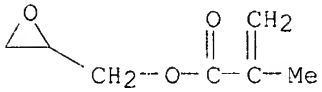
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



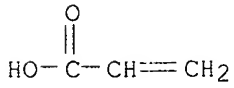
CM 2

CRN 106-91-2
CMF C7 H10 O3



CM 3

CRN 79-10-7
CMF C3 H4 O2



L189 ANSWER 9 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 2001:561055 HCAPLUS

DN 135:374044

TI Using block copolymers in nanostructured architectures in lithium **batteries**

AU Mayes, Anne M.; Sadoway, Donald R.

CS Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139-4307, USA

SO Proceedings - Electrochemical Society (**2001**), 2000-36(Interfaces, Phenomena, and Nanostructures in Lithium Batteries), 153-162
CODEN: PESODO; ISSN: 0161-6374

PB Electrochemical Society

DT Journal

LA English

AB Block copolymers are highly versatile materials for rechargeable lithium **battery** applications. Nanoscalar, periodic variation in composition is what endows these materials with their remarkable properties. As **electrolytes**, rubbery (low τg) block copolymers consisting of a PEO-based poly[oligo(oxyethylene) methacrylate] (POEM) block doped with lithium triflate and a poly(lauryl methacrylate) (PLMA) block have demonstrated high ionic **conductivity** while retaining dimensional stability. These same block copolymers have been used as templates for the synthesis of nanocomposite electrodes capable of delivering very high currents. Anodes comprising carbon nanotubes connected to a dispersion of metal nanoparticles, all self-assembled within the POEM phase of the POEM - b - PMMA diblock copolymer have been characterized in coin-cell **battery** test configurations. In charge/discharge tests over hundreds of cycles at rates as high as 4 C these electrodes exhibited high resistance to capacity fade.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST lithium **battery electrolyte** electrode block **copolymer**

IT Polymers, uses
RL: DEV (Device component use); USES (Uses)
(block; using block copolymers in nanostructured architectures in lithium **batteries**)

IT **Secondary batteries**
(lithium; using block copolymers in nanostructured architectures in lithium **batteries**)

IT **Battery electrolytes**
Polymer electrolytes
(self-doped block **copolymer electrolytes**; using block **copolymers** in nanostructured architectures in lithium **batteries**)

IT **Battery anodes**
Battery electrodes
Ionic **conductivity**
(using block copolymers in nanostructured architectures in lithium **batteries**)

IT 79-41-4D, Methacrylic acid, alkyl esters, polymers with polyethylene glycol methacrylate, block 24991-55-7, Polyethylene glycol dimethyl ether 72892-39-8 211621-80-6 **374591-39-6**
RL: DEV (Device component use); USES (Uses)
(using block copolymers in nanostructured architectures in lithium **batteries**)

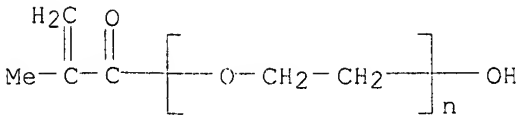
IT **374591-39-6**
RL: DEV (Device component use); USES (Uses)
(using block copolymers in nanostructured architectures in lithium **batteries**)

RN 374591-39-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with lithium 2-methyl-2-propenoate and α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl), block (9CI) (CA INDEX NAME)

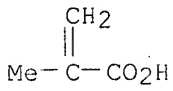
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



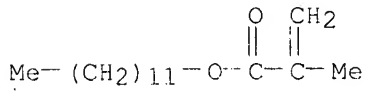
CM 2

CRN 13234-23-6
CMF C4 H6 O2 . Li



CM 3

CRN 142-90-5
CMF C16 H30 O2



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L189 ANSWER 10 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:49109 HCAPLUS
DN 132:110582
TI Nonaqueous secondary **batteries**
IN Tomiyama, Hideki
PA Fuji Photo Film Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000021449	A	20000121	JP 1998-186328	19980701 <--
	JP 4003298	B2	20071107		
PRAI	JP 1998-186328		19980701 <--		

AB The **batteries** comprise a Li-containing transition metal oxide cathode, a Li-intercalating Si-containing anode, and a **electrolyte** gel containing (a) organic polymer, (b) non-protonic solvent, and (c) ammonium, alkali metal, or alkaline earth metal salt. The **batteries** have excellent charge-discharge cycle characteristics.
IC ICM **H01M0010-40**

ICS H01M0010-40; H01M0004-02; H01M0004-58
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST nonaq secondary **battery** gel **electrolyte**; oxyalkylene vinyl **polymer** gel **electrolyte battery**
IT Gels
(**electrolyte**; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT **Battery electrolytes**
Polymer electrolytes
Secondary batteries
(lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT Fluoropolymers, uses
Polyoxyalkylenes, uses
RL: DEV (Device component use); USES (Uses)
(lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT Polyphosphazenes
Polyphosphazenes
Polysiloxanes, uses
Polysiloxanes, uses
RL: DEV (Device component use); USES (Uses)
(polyoxyalkylene-, graft, lithium complex; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
RL: DEV (Device component use); USES (Uses)
(polyphosphazene-, graft, lithium complex; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT Polyoxyalkylenes, uses
Polyoxyalkylenes, uses
RL: DEV (Device component use); USES (Uses)
(polysiloxane-, graft, lithium complex; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 7440-02-0, Nickel, uses
RL: DEV (Device component use); USES (Uses)
(-coated silicon anode; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 7440-21-3, Silicon, uses 7631-86-9, Silica, uses 193072-79-6
RL: DEV (Device component use); USES (Uses)
(anode; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 12190-79-3, Cobalt lithium oxide (CoLiO2)
RL: DEV (Device component use); USES (Uses)
(cathode; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 96-49-1, Ethylene carbonate 108-32-7, Propylene carbonate
RL: DEV (Device component use); USES (Uses)
(**electrolyte** solvent; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 21324-40-3, Lithium hexafluorophosphate
RL: DEV (Device component use); USES (Uses)
(**electrolyte**; lithium secondary **batteries** with **polymer** gel **electrolytes**)
IT 9003-11-6, Ethylene oxide-propylene oxide copolymer 9011-17-0 24937-79-9, Poly(vinylidene fluoride) 24968-79-4, Acrylonitrile-methyl acrylate copolymer 25014-41-9, Polyacrylonitrile 25067-61-2, Polymethacrylonitrile 25322-68-3 25322-69-4 29613-70-5 50867-60-2, Acrylonitrile-methyl vinyl ether copolymer 98973-15-0 115401-75-7

255897-37-1 255897-39-3 255897-40-6 255897-42-8
255897-44-0 255897-45-1 255897-46-2 255897-47-3 255897-48-4
RL: DEV (Device component use); USES (Uses)
(lithium secondary **batteries** with **polymer** gel **electrolytes**)

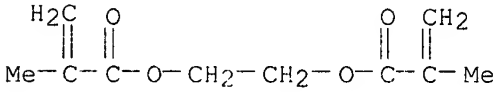
IT **255897-37-1**
RL: DEV (Device component use); USES (Uses)
(lithium secondary **batteries** with **polymer** gel **electrolytes**)

RN 255897-37-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, polymer with 1,2-ethanediyl bis(2-methyl-2-propenoate) and oxirane (9CI) (CA INDEX NAME)

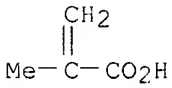
CM 1

CRN 97-90-5
CMF C10 H14 O4



CM 2

CRN 79-41-4
CMF C4 H6 O2



CM 3

CRN 75-21-8
CMF C2 H4 O

L189 ANSWER 11 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN

AN 1999:421080 HCAPLUS

DN 131:118445

TI Acrylic compositions for manufacture of **polymer** solid **electrolytes**

IN Hatazawa, Takenobu; Watanabe, Takashi

PA Sekisui Chemical Co. Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF

DT **Patent**

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11181208	A	19990706	JP 1997-347993	19971217 <--
PRAI	JP 1997-347993		19971217 <--		

AB The title compns. comprise acrylic monomers, ion dissociation agents, hardening agents, and Li compds. Resulting solid **electrolytes** have high ion **conductivity** and strength and are especially suitable for **batteries**.

IC ICM C08L0033-00
ICS **H01M0006-18**; **H01M0010-40**; C08F0002-46

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76

ST acrylic **polymer** lithium solid **electrolyte** **battery**

IT **Battery electrolytes**
Polymer electrolytes
(acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

IT **Primary batteries**
(lithium; acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

IT 7439-93-2DP, Lithium, acrylic polymer complexes, uses **233590-27-7DP**, lithium complexes **233590-28-8DP**, lithium complexes
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

IT 14283-07-9, Lithium tetrafluoroborate
RL: TEM (Technical or engineered material use); USES (Uses)
(acrylic polymer complexes; acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

IT 7473-98-5
RL: MOA (Modifier or additive use); USES (Uses)
(hardening agents; acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

IT 868-77-9 9002-89-5, Polyvinyl alcohol
RL: MOA (Modifier or additive use); USES (Uses)
(ion dissociation agents; acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

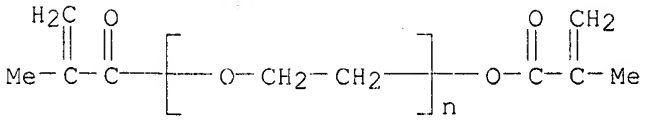
IT **233590-27-7DP**, lithium complexes **233590-28-8DP**, lithium complexes
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic compns. for manufacture of **polymer** solid **electrolytes** for lithium **batteries**)

RN 233590-27-7 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, bis(2-methyl-2-propenoate), block, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS

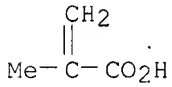


CM 2

CRN 122985-55-1
CMF C4 H6 O2 . 1/2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 79-41-4
CMF C4 H6 O2

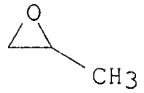


CM 4

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



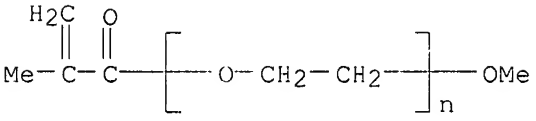
CM 6

CRN 75-21-8
CMF C2 H4 O

RN 233590-28-8 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, bis(2-methyl-2-propenoate), block, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) and α-(2-methyl-1-oxo-2-propenyl)-ω-[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

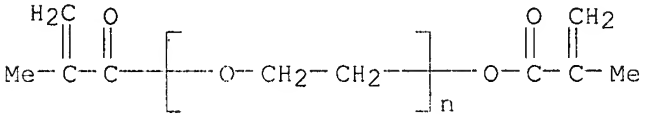
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 25852-47-5
CMF (C2 H4 O)n C8 H10 O3
CCI PMS

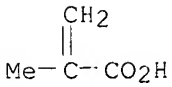


CM 3

CRN 122985-55-1
CMF C4 H6 O2 . 1/2 (C3 H6 O . C2 H4 O)x

CM 4

CRN 79-41-4
CMF C4 H6 O2

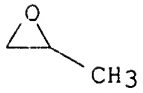


CM 5

CRN 106392-12-5
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 6

CRN 75-56-9
CMF C3 H6 O



CM 7

CRN 75-21-8
CMF C2 H4 O

L189 ANSWER 12 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1999:219933** HCAPLUS
DN **130:239896**
TI Polymer binder for electrodes in **batteries** with organic **electrolyte**
IN Simon, Bernard; Galaj, Stanislas; Boeuve, Jean-pierre
PA Alcatel, Fr.
SO Eur. Pat. Appl., 17 pp.
CODEN: EPXXDW
DT **Patent**
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 905808	A1	19990331	EP 1998-401908	19980727 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	FR 2766970	A1	19990205	FR 1997-9949	19970804 <--
	FR 2766970	B1	19990924		
	JP 11135129	A	19990521	JP 1998-220846	19980804 <--
PRAI	FR 1997-9949	A	19970804 <--		

AB A binder for the **battery** electrodes consists of a mixture of ≥2 polymers provided with functional groups with opposite polarities. One of the polymers is provided with acid functional groups and the other polymer is provided with basic functional groups. After mixing, a complex identifiable by proportion of phys.-chemical properties is formed. Typically, the polymers are polyacrylic acid and polyethylene oxide. **Battery** electrodes are fabricated from a paste consisting of an active mass and the polymer binder provided in a solution
IC ICM **H01M0004-62**
ICS **H01M0006-18; H01M0004-02**
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST polymer binder **battery** electrode
IT Polyoxyalkylenes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(in polymer binder for electrodes in **batteries** with organic **electrolyte**)
IT **Battery electrodes**
Binders
Secondary batteries
(polymer binder for electrodes in **batteries** with organic **electrolyte**)
IT 109-17-1, Tetraethylene glycol dimethacrylate 9003-01-4, Polyacrylic acid 9003-05-8, Polyacrylamide 25322-68-3, Polyethylene oxide
RL: TEM (Technical or engineered material use); USES (Uses)
(in polymer binder for electrodes in **batteries** with organic **electrolyte**)

IT 9003-06-9, Acrylamide-acrylic acid copolymer 34664-01-2, Acrylic acid-ethylene oxide copolymer **52997-09-8**, Acrylic acid-tetraethylene glycol dimethacrylate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(polymer binder for electrodes in **batteries** with organic **electrolyte**)

IT **52997-09-8**, Acrylic acid-tetraethylene glycol dimethacrylate copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(polymer binder for electrodes in **batteries** with organic **electrolyte**)

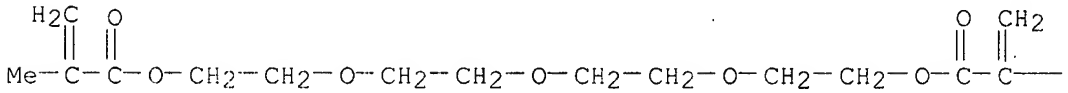
RN 52997-09-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, oxybis(2,1-ethanediyloxy-2,1-ethanediyl) ester, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 109-17-1
CMF C16 H26 O7

PAGE 1-A

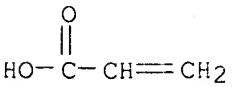


PAGE 1-B

—Me

CM 2

CRN 79-10-7
CMF C3 H4 O2



RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L189 ANSWER 13 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:378448 HCAPLUS
DN 125:116436
TI High rate vacuum deposition of **polymer electrolytes**
AU Affinito, J. D.; Gross, M. E.; Coronado, C. A.; Dunham, G. C.; Martin, P. M.
CS Mater. Sci. Dep., Pacific Northwest Lab., Richland, WA, 99352, USA
SO Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films (**1996**), 14(3, Pt. 1), 733-738t

CODEN: JVTAD6; ISSN: 0734-2101
PB American Institute of Physics
DT Journal
LA English
AB Two new, high rate, vacuum processes have been developed for the deposition of **polymer electrolyte** layers on wide web substrates. One method involves the vacuum extrusion of monomer salt solns. followed by e-beam or UV curing. The **second** method involves the vacuum flash evaporation of the monomer salt solution followed by e-beam or UV curing. Each method is compatible with simultaneous, in-line, deposition by conventional processes like sputtering or evaporation in a wide web system. The **polymer electrolytes** were prepared from poly(ethylene glycol) diacrylate, poly(ethylene glycol) monomethyl ether and acrylic acid with a com. photoinitiator Darocure 4265. The salts used were LiCF3SO3 and LiPF6. Optically clear **polymer electrolyte** layers may be deposited at line speeds in excess of 100 m min-1 with these new techniques. Ionic **conductivity** measurements were presented for vacuum deposited, evaporated and extruded **polymer electrolyte** layers with thicknesses ranging from 2 to 50 μm. Application of these methods to ongoing electrochromic and **battery** work at the Pacific Northwest Laboratory was discussed.
CC 38-2 (Plastics Fabrication and Uses)
Section cross-reference(s): 37, 76
ST polyethylene glycol deriv **polyelectrolyte** vacuum deposition; acrylic acid **copolymer polyelectrolyte** vacuum deposition; lithium salt **polyelectrolyte** vacuum deposition
IT **Polyelectrolytes**
(high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT **Electric conductivity** and **conduction**
(ionic, ionic **conductivity** of high rate vacuum deposited acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT Polymerization catalysts
(photochem., for high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT Polymerization
(photochem., high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT 21324-40-3, Lithium hexafluorophosphate 33454-82-9, Lithium trifluoromethane sulfonate
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT **178438-32-9P**, Acrylic acid-polyethylene glycol diacrylate-polyethylene glycol monomethyl ether copolymer
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)
IT 29059-10-7
RL: CAT (Catalyst use); USES (Uses)

(photoinitiator containing; high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)

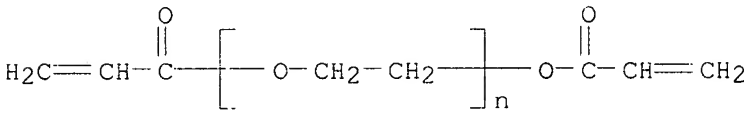
IT 7473-98-5
RL: CAT (Catalyst use); USES (Uses)
(photoinitiator; high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)

IT **178438-32-9P**, Acrylic acid-polyethylene glycol diacrylate-polyethylene glycol monomethyl ether copolymer
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(high rate vacuum deposition of acrylic acid-poly(ethylene glycol) diacrylate-poly(ethylene glycol) monomethyl ether **polymer electrolytes** with lithium salts)

RN 178438-32-9 HCAPLUS
CN 2-Propenoic acid, polymer with α-methyl-ω-hydroxypoly(oxy-1,2-ethanediyl) and α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

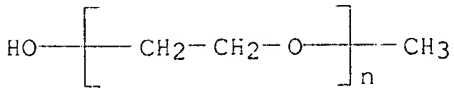
CM 1

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS



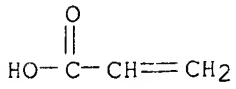
CM 2

CRN 9004-74-4
CMF (C2 H4 O)n C H4 O
CCI PMS



CM 3

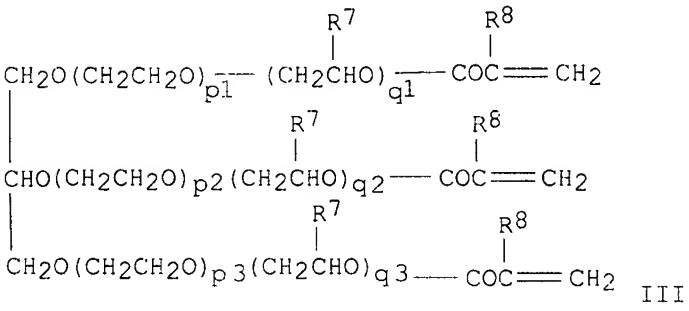
CRN 79-10-7
CMF C3 H4 O2



L189 ANSWER 14 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1995:294688** HCAPLUS
DN **122:149225**
TI Ion-**conductive** macromolecular compound
IN Takeda, Kazunari; Ido, Shuichi
PA Yuasa Battery Co Ltd, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06220147	A	19940809	JP 1993-11494	19930127 <--
	JP 3306150	B2	20020724		
PRAI	JP 1993-11494		19930127 <--		

GI



III

AB The macromol. compound comprises ≥1 ionic compound as dissolved state, R1(CH2CH2O)m(CH2CHR2O)nCOC(R3):CH2 (I; R1-3 = H, C≥1 lower alkyl; m ≥1; n ≥0; n/m = 0-5), CH2:C(R4)CO(CH2CH2O)s(CH2CHR5O)tCOC(R6):CH2 (II; R4-6 = H, C≥1 lower alkyl; S ≥3; t ≥0; t/s = 0-5), and III (R7-8 = H, C≥1 lower alkyl; p1 ≥3; p2 ≥3; p3 ≥3; q1 ≥0; q2 ≥0; q3 ≥0; q1/p1 = 0-5; q2/p2 = 0-5; q3/p3 = 0-5; p1 + q1 ≥10; p2 + q2 ≥10; p3 + q3 ≥10) in which at least III is polymerized The title compound may contain ethylene oxide polymer and/or ethylene oxide-propylene oxide copolymer.
IC ICM C08F0299-02
ICS C08F0002-44; H01B0001-06; **H01M0004-60**; **H01M0010-40**
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 37, 38
ST ion **conductive** compd polyoxyalkylene; glycerin polyoxyethylene ether ion **conductor**; polyoxyethylene ion **conductor**; polyoxypropylene copolymer ion **conductor**
IT **Electric conductors**, polymeric
(ion **conductors** containing)
IT Polyoxyalkylenes, properties
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(ion **conductors** containing)
IT **161162-48-7**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or

engineered material use); USES (Uses)
(ion **conductors** containing)

IT 7791-03-9, Lithium perchlorate (LiClO4) 9003-11-6, Ethylene oxide-propylene oxide copolymer 25322-68-3, Poly(ethylene oxide)
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(ion **conductors** containing)

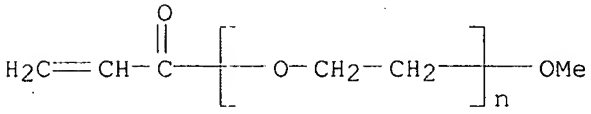
IT **161162-48-7**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(ion **conductors** containing)

RN 161162-48-7 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, ether with 1,2,3-propanetriol (3:1), 2-propenoate, polymer with α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) and α-(1-oxo-2-propenyl)-ω-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

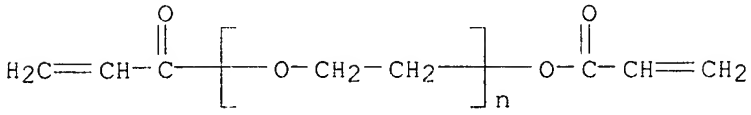
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 26570-48-9
CMF (C2 H4 O)n C6 H6 O3
CCI PMS

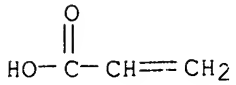


CM 3

CRN 76416-58-5
CMF C3 H8 O3 . 3 (C3 H6 O . C2 H4 O)x . x C3 H4 O2

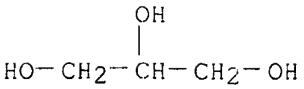
CM 4

CRN 79-10-7
CMF C3 H4 O2



CM 5

CRN 56-81-5
CMF C3 H8 O3

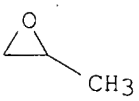


CM 6

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 7

CRN 75-56-9
CMF C3 H6 O



CM 8

CRN 75-21-8
CMF C2 H4 O

L189 ANSWER 15 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1994:327534** HCAPLUS
DN **120:327534**
TI Grafted microporous polyolefin separators for secondary **batteries**, and their manufacture and use
IN Gineste, Jean Luc; Pourcelly, Gerald; Brunea, John; Perton, Francoise; Broussely, Michel
PA SAFT S. A., Fr.
SO Fr. Demande, 19 pp.
CODEN: FRXXBL
DT **Patent**
LA French
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	FR 2694842	A1	19940218	FR 1992-9900	19920811 <--
	FR 2694842	B1	19940930		

	EP 587470	A1	19940316	EP 1993-402037	19930810 <--
	EP 587470	B1	19970402		
	R: DE, FR, GB				
	JP 06187961	A	19940708	JP 1993-198418	19930810 <--
	US 5578400	A	19961126	US 1996-600281	19960212 <--
PRAI	FR 1992-9900	A	19920811 <--		
	US 1993-103702	B1	19930810 <--		

AB The separators consist of a microporous polyolefin film grafted with ≥1 monomers selected from diethylene glycol-dimethacrylate (DGD), furfuryl acrylate, and a mixture of diethylene glycol-dimethacrylate and acrylic acid. The separators are manufactured by 3-stage process comprising irradiating the films, optionally storing the irradiated films, and immersing the films in a grafting solution comprising the monomer(s) and a solvent of water, MeOH, and/or BuOH. The separators are used in **batteries** containing a nonaq. **electrolyte**, an anode selected from Li, Li alloys, and Li intercalation compds., and a cathode selected from oxides and sulfides of transition metals. A 50-μm Celgard 2502 (polypropene) film was irradiated with electrons at 1 Mrad in the presence of O, at 65° for 19 h, and immersed in a solution of DGD 19, MeOH 62, and water 19 volume% containing FeNH4(SO4)2 0.2 and methylene blue 0.88 g/L, for 32% grafting. **Batteries** using the film as separator and LiAsF6 as the salt had **elec.** resistance 8.1-9.4 Ω-cm2.

IC ICM **H01M0002-16**
ICS **H01M0010-24**; C08J0007-18

ICI C08L0051-06

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38

ST polyolefin graft copolymer **battery** separator; diethyleneglycol dimethacrylate polypropene graft copolymer

IT **Batteries, secondary**
(**separators**, polyolefin graft copolymer)

IT 2358-84-1D, Diethylene glycol dimethacrylate, graft copolymers with polyolefins 10525-17-4D, Furfuryl acrylate, graft copolymers with polyolefins **64054-76-8D**, graft copolymers with polyolefins
RL: USES (Uses)
(for **battery** separators)

IT 61-73-4, Methylene blue 7447-39-4, Copper chloride, uses 7705-08-0, Iron chloride, uses 7758-98-7, Copper sulfate, uses 10028-22-5, Iron sulfate 10045-89-3, Mohr's salt
RL: USES (Uses)
(in **battery** separator manufacture)

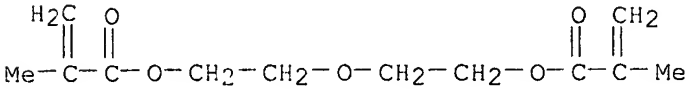
IT **64054-76-8D**, graft copolymers with polyolefins
RL: USES (Uses)
(for **battery** separators)

RN 64054-76-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,1'-(oxydi-2,1-ethanediyl) ester, polymer with 2-propenoic acid (CA INDEX NAME)

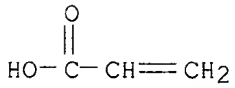
CM 1

CRN 2358-84-1
CMF C12 H18 O5



CM 2

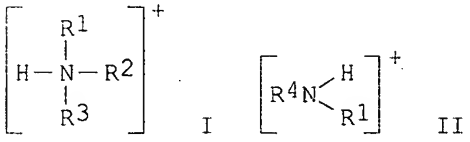
CRN 79-10-7
CMF C3 H4 O2



L189 ANSWER 16 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1993:14860** HCAPLUS
DN **118:14860**
TI Ion-**conductive polymer** gel **electrolyte**
IN Yasukawa, Eiki; Seo, Iwao; Miyata, Kikuko; Mori, Shoichiro; Ida, Kazuhiko; Shima, Kunihisa
PA Mitsubishi Yuka K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04073803	A	19920309	JP 1990-187420	19900716 <--
PRAI JP 1990-187420		19900716 <--		

OS MARPAT 118:14860
GI



I II

AB An ion-**conductive polymer** gel **electrolyte** with a high ion **conductivity** at room temperature comprises a matrix polymer made of a vinyl polymer, a solute consisting of ammonium ion I and/or II [R1-3 = H, C1-4 alkyl, C6-10 aryl; R4 = C3-10 moiety forming aliphatic or aromatic heterocyclyl by combining with N in II] as a cation component and/or an acid conjugated base as an anion component, and an organic solvent.
IC ICM H01B0001-06
ICS C08K0005-00; C08K0005-17; C08L0033-14; H01G0009-02; **H01M0006-18**; **H01M0010-40**
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 37
ST ion **conductive polymer** gel **electrolyte**
IT **Electrolytes**
(ion-**conductive**, **polymer**, gel, with high **conductivity** at room temperature)
IT 11128-98-6, Ammonium borate 19090-60-9, Ammonium adipate 25249-16-5, 2-Hydroxyethyl methacrylate homopolymer 29403-23-4 54141-42-3 82169-85-5, Ammonium azelate 144280-25-1 **144595-39-1** 144892-77-3

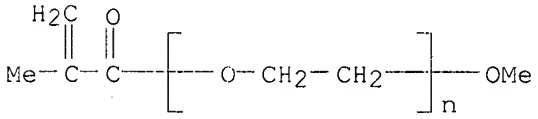
RL: USES (Uses)
(ion-**conductive polymer** gel **electrolyte** containing)

IT **144595-39-1**
RL: USES (Uses)
(ion-**conductive polymer** gel **electrolyte** containing)

RN 144595-39-1 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) and 1,2,3-propanetriol (9CI) (CA INDEX NAME)

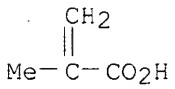
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



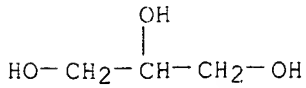
CM 2

CRN 79-41-4
CMF C4 H6 O2



CM 3

CRN 56-81-5
CMF C3 H8 O3



L189 ANSWER 17 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:452378 HCAPLUS
DN 117:52378
TI **Polymer** solid **electrolytes**
IN Ido, Shuichi; Noda, Tomohiko; Imachi, Hiroshi
PA Yuasa Battery Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03205416	A	19910906	JP 1990-825	19900106 <--
	JP 08032754	B	19960329		
PRAI	JP 1990-825		19900106 <--		

AB The **electrolytes** comprise a network of (meth)acrylate-crosslinked ethylene oxide-propylene oxide copolymer, an ionic salts, and optionally compds. miscible with the ionic salts. Thus, a mixture of dimethacrylate of ethylene oxide-propylene oxide copolymer (mol ratio 80:20, mol. weight 4200) 70, polyoxyethylene Me ether monomethacrylate ester (mol. weight 250) 30, LiClO4 9.5, dimethoxyethane 100, benzophenone 2, and Et3N 2 parts was cast on a glass plate and UV-irradiated to form a 100 μm-thick film with ionic **conductivity** 8 + 10-6 S/cm and no cracking on 180° flexing vs. 8 + 10-6 and cracking, resp., for a control prepared from ethylene oxide-propylene oxide copolymer dimethacrylate with mol. weight 450. The **electrolytes** are useful for **batteries**, electrochromic devices, , electrochem. sensors, etc.

IC ICM C08F0299-00
ICS H01B0001-06; **H01M0006-18**; **H01M0010-40**

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 35, 76

ST polyoxyalkylene acrylate crosslinked solid **electrolyte**

IT **Battery electrolytes**
(lithium salt in (meth)acrylate-crosslinked polyoxyalkylene matrix for)

IT Optical imaging devices
(electrochromic, **electrolytes** for, (meth)acrylate-crosslinked polyoxyalkyelen-lithium salt)

IT **138719-27-4D**, lithium complexes 138719-28-5D, lithium complexes **141182-93-6D**, lithium complexes
RL: USES (Uses)
(**electrolyte**, for **batteries** and electrochromic devices)

IT 7791-03-9, Lithium perchlorate
RL: USES (Uses)
(**electrolytes** containing, (meth)acrylate-crosslinked polyoxyalkylene copolymers and, for **batteries** and electrochromic devices)

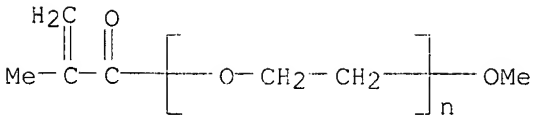
IT **138719-27-4D**, lithium complexes **141182-93-6D**, lithium complexes
RL: USES (Uses)
(**electrolyte**, for **batteries** and electrochromic devices)

RN 138719-27-4 HCAPLUS

CN Oxirane, methyl-, polymer with oxirane, bis(2-methyl-2-propenoate), polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS

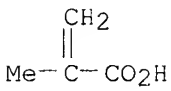


CM 2

CRN 87003-89-2
CMF C4 H6 O2 . 1/2 (C3 H6 O . C2 H4 O)x

CM 3

CRN 79-41-4
CMF C4 H6 O2

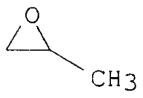


CM 4

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



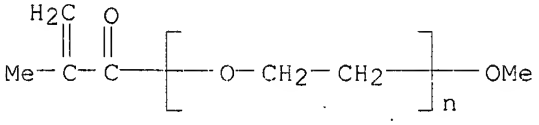
CM 6

CRN 75-21-8
CMF C2 H4 O

RN 141182-93-6 HCAPLUS
CN Oxirane, methyl-, polymer with oxirane, di-2-propenoate, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS

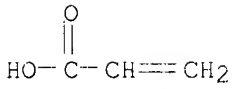


CM 2

CRN 52503-44-3
CMF (C3 H6 O . C2 H4 O)x . 2 C3 H4 O2

CM 3

CRN 79-10-7
CMF C3 H4 O2

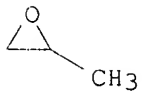


CM 4

CRN 9003-11-6
CMF (C3 H6 O . C2 H4 O)x
CCI PMS

CM 5

CRN 75-56-9
CMF C3 H6 O



CM 6

CRN 75-21-8
CMF C2 H4 O

L189 ANSWER 18 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1992:118869** HCAPLUS

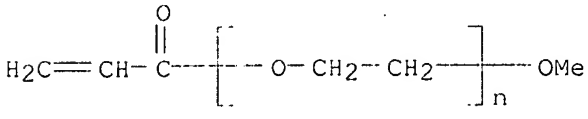
DN 116:118869
TI Acryloyl-modified polyalkylene oxide **copolymer** solid **electrolyte**
IN Mizuno, Shinichiro
PA Toyo Ink Mfg. Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03238704	A	19911024	JP 1990-35449	19900216 <--
PRAI JP 1990-35449		19900216 <--		

AB The **electrolyte** contains a metal salt and a crosslinked resin containing a copolymer of an acryloyl-modified polyalkylene oxide with an organic compound having a double bond and ≥1 functional groups. The resin may be crosslinked with a crosslinking agent. An **electrolyte** containing methoxy-modified polyethylene glycol monoacrylate-2-hydroxyethyl acrylate copolymer and LiClO4 showed high ion **conductivity**
IC ICM H01B0001-06
ICS C08K0003-10; C08L0033-14; G02F0001-15; **H01M0006-18**; **H01M0010-40**
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38
ST acryloyl polyalkylene oxide solid **electrolyte**
IT **Electrolytes**
(**solid**, acryloyl-modified polyalkylene oxide copolymer, with high ion **conductivity**)
IT 7791-03-9, Lithium perchlorate
RL: USES (Uses)
(acryloyl-modified polyalkylene oxide **copolymer** solid **electrolyte** containing)
IT 139308-66-0 139308-67-1 139308-68-2 **139308-69-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(solid **electrolyte**, with high ion **conductivity**)
IT **139308-69-3**
RL: TEM (Technical or engineered material use); USES (Uses)
(solid **electrolyte**, with high ion **conductivity**)
RN 139308-69-3 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, polymer with oxiranylmethyl 2-methyl-2-propenoate and α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

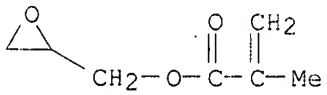
CM 1

CRN 32171-39-4
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



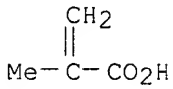
CM 2

CRN 106-91-2
CMF C7 H10 O3



CM 3

CRN 79-41-4
CMF C4 H6 O2



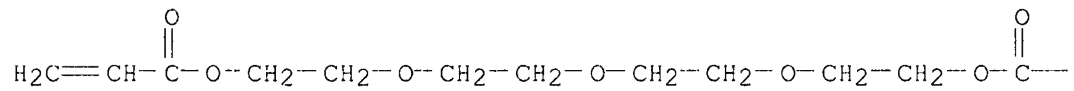
L189 ANSWER 19 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1991:495860 HCAPLUS
DN 115:95860
TI Solid state **electrolyte** membranes for direct methanol **fuel cells**
AU Kjaer, Jorgen; Yde-Andersen, Steen; Knudsen, Niels A.; Skou, Eivind
CS Energy Res. Lab. A/S, Odense, DK-5230, Den.
SO Solid State Ionics (**1991**), 46(1-2), 169-73
CODEN: SSIOD3; ISSN: 0167-2738
DT Journal
LA English
AB Solid state **electrolyte** membranes of Sn-mordenite with tetraethylene glycol diacrylate (I)/acrylic acid polymer binder have a proton **conductivity** of 10-3/Ω-cm at ambient temperature and 100% humidity and are suitable for use in direct MeOH **fuel cells** as replacement for Nafion membranes. The 0.1-0.3 mm membranes were prepared by mixing monomer components for the binder and Sn-mordenite powder in 1:1 ratio, placed between Mylar sheets, and cured under UV light. The mech. properties of the membranes were dependent on monomer mixture composition; 3:1 I/acrylic acid mixts. produced membranes with low MeOH uptake/diffusion and sufficient mech. stability for **fuel cell** use.
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38, 76
ST tin mordenite membrane polyethyleneglycolacrylate binder; proton **cond** mordenite membrane **electrolyte**; methanol **fuel cell** membrane **electrolyte**
IT **Fuel cells**
(methanol, tin mordenite-**polymer** binder membrane **electrolytes** for)
IT **Electric conductivity** and **conduction**
(ionic, of tin mordenite membranes, polymer binder composition effect on)
IT Zeolites, properties
RL: PRP (Properties)
(mordenite-type, tin-exchanged, membranes, proton **conductivity** and mech. properties of, polymer binder effect on, for methanol **fuel cell electrolyte**)

IT **79643-10-0**
RL: USES (Uses)
(binders, tin mordenite membranes containing, proton **conductivity** and mech. properties of, for methanol **fuel cells**)
IT 67-56-1, Methanol, properties
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(diffusion of, in tin mordenite-polymer binder membranes, **fuel cell** use in relation to)
IT **79643-10-0**
RL: USES (Uses)
(binders, tin mordenite membranes containing, proton **conductivity** and mech. properties of, for methanol **fuel cells**)
RN 79643-10-0 HCAPLUS
CN 2-Propenoic acid, polymer with oxybis(2,1-ethanediyloxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17831-71-9
CMF C14 H22 O7

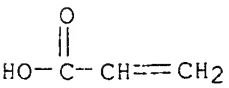
PAGE 1-A



PAGE 1-B

CM 2

CRN 79-10-7
CMF C3 H4 O2



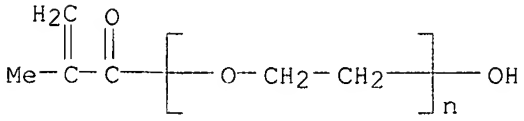
L189 ANSWER 20 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN **1989:193740** HCAPLUS
DN **110:193740**
OREF 110:32189a,32192a
TI Design of single ionic **conduction** in **polymeric** solid **electrolytes**
AU Ono, Hiroyuki; Tsuchida, Eishun
CS Dep. Polym. Chem., Waseda Univ., Tokyo, 160, Japan
SO Journal of Macromolecular Science, Chemistry (**1989**), A26(2-3), 551-66

CODEN: JMCHBD; ISSN: 0022-233X
DT Journal
LA English
AB Oligo(oxyethylene) methacrylate (I) was synthesized as a basic material to design a **polymeric** solid **electrolyte**. The I homopolymer has a glass transition temperature of -70 to -80°, solubilizes inorg. salts without solvent, and the dissociated ions migrate fast to give very high ionic **conductivity** (>10-5 S/cm). Although the a.c. **conductivity** is high, the current decreases gradually under d.c. conditions. This is improved by the design of an ionic **conductor** using only cations. Oligo(oxyethylene) methacrylate-alkali metal methacrylate copolymer is prepared as an organic solid **electrolyte** which allows cationic single-ion **conduction**. The ionic **conductivity** of the films depends on the **electrolyte** content, the dissociation energy of the comonomeric **electrolytes**, and the degree of segmental motion surrounding the ions in the polymer matrix. The ionic **conductivity** of Li or K is .apprx.10-6 S/cm in these polymeric systems at 80°. The plot of logarithmic **conductivity** vs. reciprocal absolute temperature is a curved line. The Williams-Landel-Ferry parameters, calculated from the temperature dependence of the **conductivity**, coincided with theor. values within a certain range. The single-ion **conduction** in these films is affected considerably by the segmental motion of the matrix polymer. This is also confirmed by the Vogel-Tammann-Fulcher plot.

CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 76
ST single ionic **conduction** solid **polyelectrolyte**; polyoxyethylene methacrylate single ionic **cond**; lithium methacrylate copolymer ionic **cond**; potassium methacrylate copolymer ionic **cond**; segmental motion **polyelectrolyte** ionic **cond**
IT Glass temperature and transition
(of oligo(oxyethylene) methacrylate copolymers, single ionic **conduction** in relation to)
IT Chains, chemical
(segmental motion of, of oligo(oxyethylene) methacrylate polymers, single ionic **conduction** in relation to)
IT **Electric conductivity** and **conduction**
(ionic, of oligo(oxyethylene) methacrylate polymers)
IT **Polyelectrolytes**
(solid, oligo(oxyethylene) methacrylate polymers, single ionic **conduction** in)
IT 7791-03-9, Lithium perchlorate
RL: PRP (Properties)
(oligo(oxyethylene) methacrylate polymers containing, ionic **conductivity** of)
IT **103285-01-4 120359-13-9 120359-14-0**
RL: PRP (Properties)
(solid **polyelectrolytes**, single ionic **conduction** in)
IT **103285-01-4 120359-13-9 120359-14-0**
RL: PRP (Properties)
(solid **polyelectrolytes**, single ionic **conduction** in)
RN 103285-01-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

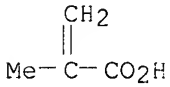
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 13234-23-6
CMF C4 H6 O2 . Li

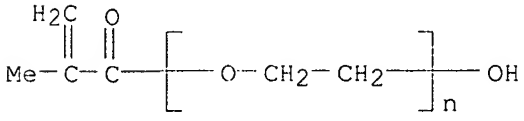


● Li

RN 120359-13-9 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, sodium salt (1:1), polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

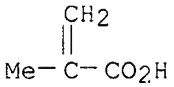
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

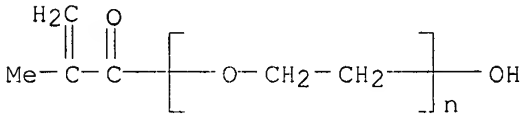
CRN 5536-61-8
CMF C4 H6 O2 . Na



RN 120359-14-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, potassium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

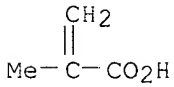
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

CRN 6900-35-2
CMF C4 H6 O2 . K



L189 ANSWER 21 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1988:476533 HCAPLUS
DN 109:76533
OREF 109:12779a,12782a
TI Ion tunneling in **polymeric** solid **electrolytes** for **battery** and electrochromic display in the dry state
AU Tsuchida, Eishun
CS Dep. Polym. Chem., Waseda Univ., Tokyo, 160, Japan
SO Journal of Macromolecular Science, Chemistry (**1988**), A25(5-7), 687-704
CODEN: JMCHBD; ISSN: 0022-233X
DT Journal
LA English
AB Poly[(oligooxyethylene)methacrylate]-alkali metal salt hybrids and (oligooxyethylene)methacrylate-alkali metal methacrylate copolymer showed

ionic **conductivities** >10-5 and 10-7 S/cm, resp., at room temperature and bi- or single-ionic tunneling behavior. An all-solid-state electrochromic display and a dry **battery** were prepared with these **polymer** solid **electrolytes**. The electrochromic display showed excellent coloring and bleaching response at 1-3 V, and the **battery** had an open-circuit voltage (3.1 V) stability of >2 wk.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 37, 38, 74, 76

ST ion tunneling **polymer electrolyte**; **battery** ion tunneling **polymer electrolyte**; electrochromic display ion tunneling polymer; polyoligooxyethylene methacrylate **electrolyte battery**; alkali metal salt **polymer electrolyte**; methacrylate **copolymer battery electrolyte**; **elec cond battery conducting** polymer

IT Tunneling
(in **polymeric** solid **electrolytes** for **battery** and electrochromic display in dry state)

IT **Electric conductors**
(polymeric, polyethylene glycol acrylate copolymers, ion tunneling in, for **electrolytes** in **battery** and electrochromic display in dry state)

IT Optical imaging devices
(electrochromic, solid-state, **polymer electrolyte** for, bi-ionic and single ionic tunneling in)

IT **Electric conductivity** and **conduction**
(ionic, of poly[(oligooxyethylene)methacrylate]-metal salt hybrids, salt content dependence of)

IT **Batteries, primary**
(solid-**electrolyte**, lithium-manganese dioxide, **polymer electrolyte** for, bi-ionic and single ionic tunneling in)

IT 1314-35-8, uses and miscellaneous 50926-11-9
RL: USES (Uses)
(electrodes, in electrochromic display with polyethylene glycol metal salt acrylate **copolymer electrolyte**)

IT 87105-87-1
RL: USES (Uses)
(**electrolytes**, containing lithium perchlorate, for **battery** and electrochromic display in dry state)

IT 333-20-0, Potassium thiocyanate 540-72-7, Sodium thiocyanate 556-65-0, Lithium thiocyanate 7791-03-9, Lithium perchlorate
RL: USES (Uses)
(**electrolytes**, containing polyethylene glycol Me ether methacrylate polymer, with bi- or single ionic tunneling, for **battery** and electrochromic display in dry state)

IT **95410-90-5 102814-54-0 104491-11-4**
RL: USES (Uses)
(**electrolytes**, ionic **conductivity** of, for **battery** and electrochromic display in dry state)

IT 26915-72-0, Polyethylene glycol methyl ether methacrylate
RL: RCT (Reactant); RACT (Reactant or reagent)
(**polymerization** of, for **electrolytes** containing alkali metal salts, with bi- or single ionic tunneling, for **battery** and electrochromic display in dry state)

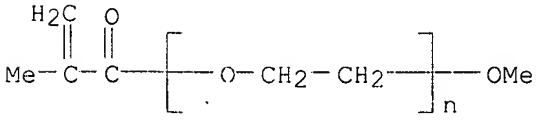
IT **95410-90-5 102814-54-0 104491-11-4**
RL: USES (Uses)
(**electrolytes**, ionic **conductivity** of, for **battery** and electrochromic display in dry state)

RN 95410-90-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, sodium salt (1:1), polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

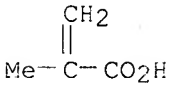
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 5536-61-8
CMF C4 H6 O2 . Na

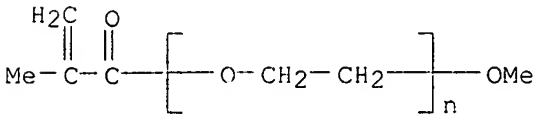


● Na

RN 102814-54-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

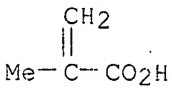
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

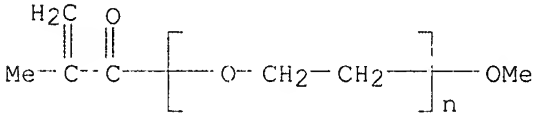
CRN 13234-23-6
CMF C4 H6 O2 . Li



RN 104491-11-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, potassium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

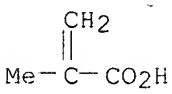
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 6900-35-2
CMF C4 H6 O2 . K



L189 ANSWER 22 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1986:534516 HCAPLUS
DN 105:134516
OREF 105:21723a,21726a
TI Polymeric ionic **conductors**
IN Kobayashi, Norihisa; Uchiyama, Masahiro; Tsuchida, Hidetoshi
PA Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT **Patent**
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61047713	A	19860308	JP 1984-168820	19840814 <--

PRAI JP 1984-168820 19840814 <--

AB A polymeric ionic **conductor** forming flexible films and useful in solid-**electrolyte batteries** and electrochromic display devices comprises 1-40 mol% (meth)acrylic acid (or its Li, Na, or K salt) and 60-99 mol% polyethylene glycol (d. p. 3-20) mono(meth)acrylate. Thus, a mixture of 0.5 g polyethylene glycol (d.p. 5) Me ether methacrylate (I) (mol. weight 250) and 0.05 g Li methacrylate in 5 mL MeOH containing AIBN (in an amount of 1 mol/mol-I) was cast on a Teflon plate and polymerized at 100° for 24 h under reduced pressure to give a 0.13-mm polymeric film (mol. weight 53,000) exhibiting ionic **conductivity** 1.1 + 10-7 S/cm.

IC ICM C08F0220-28

ICI C08F0220-28, C08F0220-06

CC 35-4 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 72, 76

ST polyethylene glycol methacrylate copolymer; lithium methacrylate copolymer ionic **conductor**; solid **electrolyte battery** **polymeric conductor**; electrochromic display device polymeric **conductor**

IT **Electric conductors**
(ionic, methacrylic acid (salt)-polyethylene glycol (meth)acrylate copolymers as, film-formable, for solid-**electrolyte** **batteries** or electrochromic display devices)

IT **Batteries, secondary**
(solid-**electrolyte**, methacrylic acid (salt)-polyethylene glycol (meth)acrylate copolymers for)

IT 87228-08-8 **95410-90-5 102814-54-0 104491-11-4**
104491-12-5 104491-13-6 104491-14-7 104491-16-9
RL: USES (Uses)
(films, ionic **conductive**, for solid-**electrolyte** **batteries** or electrochromic display apparatus)

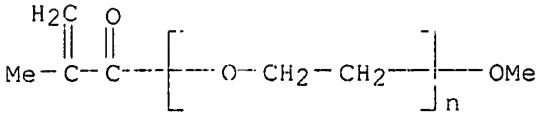
IT **95410-90-5 102814-54-0 104491-11-4**
RL: USES (Uses)
(films, ionic **conductive**, for solid-**electrolyte** **batteries** or electrochromic display apparatus)

RN 95410-90-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, sodium salt (1:1), polymer with α-(2-methyl-1-oxo-2-propen-1-yl)-ω-methoxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

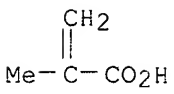
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 5536-61-8
CMF C4 H6 O2 . Na

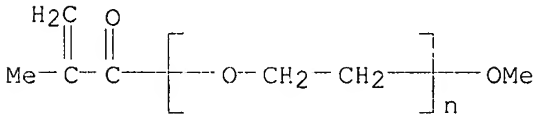


● Na

RN 102814-54-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

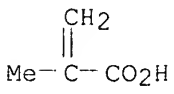
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 13234-23-6
CMF C4 H6 O2 . Li

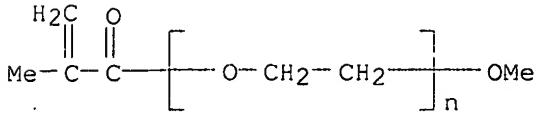


● Li

RN 104491-11-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, potassium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

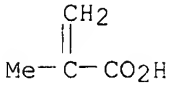
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 6900-35-2
CMF C4 H6 O2 . K

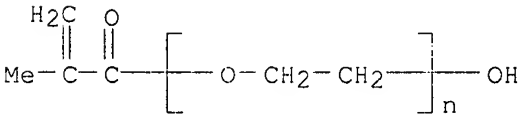


L189 ANSWER 23 OF 23 HCAPLUS COPYRIGHT 2008 ACS on STN
AN 1986:415981 HCAPLUS
DN 105:15981
OREF 105:2569a,2572a
TI Poly[lithium methacrylate-co-oligo(oxyethylene)methacrylate] as a solid **electrolyte** with high ionic **conductivity**
AU Kobayashi, Norihisa; Uchiyama, Masahiro; Tsuchida, Eishun
CS Dep. Polym. Chem., Waseda Univ., Tokyo, 160, Japan
SO Solid State Ionics (**1985**), 17(4), 307-11
CODEN: SSIOD3; ISSN: 0167-2738
DT Journal
LA English
AB Poly[lihtium methacrylate-co-oligo(oxyethylene)methacrylate] film was prepared as a **polymeric** solid **electrolyte** which showed a Li ionic **conductivity** of 2 + 10-7 (S/cm). This film containts no organic plasticizer nor low-mol. weight Li salts and was shown to be a single-ion **conductor** in the solid state. Li+ ionic **cond** . was deeply influenced by the glass transition temperature and Li methacrylate content of the film. A rechargeable **battery** composed of metallic Li/this film/graphite showed better characteristics than any previously reported systems using **polymeric** solid **electrolytes**.
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 36
ST lithium methacrylate **polymer electrolyte**; oligooxyethylenemethacrylate polymer **cond**; oxyethylenemethacrylate polymer **cond**
IT **Batteries, primary**
(from poly[lithium methacrylate-oligo(oxyethylene)methacrylate])
IT Polymerization
(of lithium methacrylate with oligo(oxyethylene)methacrylate for ionic **conductors**)
IT **Electric conductors**
(ionic, from poly[lithium methacrylate-oligo(oxyethylenemethacrylate)])
IT **Electric conductivity** and **conduction**
(ionic, in poly[lithium methacrylate-co-oligo(oxyethylene)methacrylate] films)
IT **Electric conductivity** and **conduction**
(ionic, of poly[lithium methacrylate-oligo(oxyethylene)methacrylate])
IT 78-67-1 7791-03-9 13234-23-6 25179-23-1
RL: USES (Uses)
(in ionic **conductor** polymer preparation)

IT **103285-01-4P**
RL: PREP (Preparation)
(preparation of, as ionic **conductor**)
IT **102814-54-0**
RL: TEM (Technical or engineered material use); USES (Uses)
(solid **electrolyte**, with high ionic **conductivity**)
IT **103285-01-4P**
RL: PREP (Preparation)
(preparation of, as ionic **conductor**)
RN 103285-01-4 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

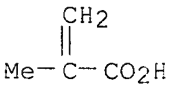
CM 1

CRN 25736-86-1
CMF (C2 H4 O)n C4 H6 O2
CCI PMS



CM 2

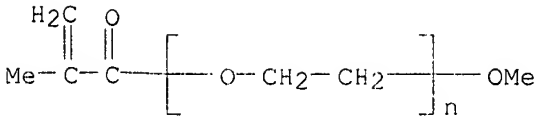
CRN 13234-23-6
CMF C4 H6 O2 . Li



IT **102814-54-0**
RL: TEM (Technical or engineered material use); USES (Uses)
(solid **electrolyte**, with high ionic **conductivity**)
RN 102814-54-0 HCAPLUS
CN 2-Propenoic acid, 2-methyl-, lithium salt, polymer with α-(2-methyl-1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

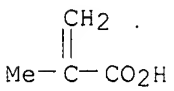
CM 1

CRN 26915-72-0
CMF (C2 H4 O)n C5 H8 O2
CCI PMS



CM 2

CRN 13234-23-6
CMF C4 H6 O2 . Li



● Li

=> d his

(FILE 'HOME' ENTERED AT 11:08:26 ON 16 APR 2008)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 11:09:18 ON 16 APR 2008

```
L1             2 S US20070040145/PN OR (US2005-571998# OR WO2004-JP576 OR JP2003
                 E MURAMOTO/AU
                 E MURAMOTO H/AU
L2            77 S E3,E17
                 E MURAMOTO NAME/AU
                 E HIROO/AU
                 E NIITANI/AU
L3            13 S E31
                 E TAKESHI/AU
L4             4 S E3
                 E TAKESHI N/AU
L5             4 S E10
                 E NITANI/AU
L6             1 S E26
                 E AOYAGI/AU
L7            48 S E87
                 E AOYAGI KO/AU
L8            29 S E3,E8,E9
L9            10 S E78
                 E KOICHIRO/AU
                 E KO ICHIRO/AU
L10            1 S E3
                 E L1 PA
                 E NIPPON SODA/CO
L11         3967 S E3-E15/CO,PA,CS
                 E E5+ALL
L12         4281 S E2+RT OR E2-E5/PA,CS
L13            1 S L1 AND L2-L12
                 SEL RN
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     FILE 'REGISTRY' ENTERED AT 11:13:50 ON 16 APR 2008
L14           14 S E1-E14
L15           10 S L14 AND PMS/CI AND NC>=2

     FILE 'HCAPLUS' ENTERED AT 11:15:04 ON 16 APR 2008
L16          181 S L2-L10 NOT L13

     FILE 'REGISTRY' ENTERED AT 11:15:18 ON 16 APR 2008

     FILE 'HCAPLUS' ENTERED AT 11:15:18 ON 16 APR 2008
L17             TRA L16 1- RN :     1657 TERMS

     FILE 'REGISTRY' ENTERED AT 11:15:24 ON 16 APR 2008
L18          1657 SEA L17
L19           209 S L18 AND PMS/CI
L20           155 S L19 NOT PROPENOIC
L21           110 S L20 AND NC>=2
L22            27 S L21 AND C2H4O
L23            14 S L22 NOT (BR/ELS OR OC2/ES)
L24            12 S L23 NOT (OC2-C6/ES OR N/ELS)
L25            83 S L21 NOT L22
L26            54 S L19 NOT L20
L27             6 S L26 AND C4H6
L28             3 S L27 NOT N/ELS
L29             2 S L28 NOT 107080-92-2
L30            17 S L26 AND C2H4O
L31            13 S L30 NOT N/ELS
L32             4 S L30 NOT L31
L33             1 S L31 AND 79-41-4/CRN
L34            11 S L31 NOT L15,L24,L29,L33
L35            35 S L15,L24,L29,L33,L34

     FILE 'HCAPLUS' ENTERED AT 11:29:51 ON 16 APR 2008
L36           135 S L35
L37            20 S L36 AND L1-L13
L38             0 S L37 AND PY<=2004 NOT P/DT
L39             7 S L37 AND (PD<=20040123 OR PRD<=20040123 OR AD<=20040123) AND P
L40             7 S L13,L39

     FILE 'HCAPLUS' ENTERED AT 11:31:09 ON 16 APR 2008

     FILE 'REGISTRY' ENTERED AT 12:49:56 ON 16 APR 2008
L41        613394 S PMS/CI AND NC>=2 AND O>=3
L42               STR
L43            50 S L42 SAM SUB=L41
L44        168078 S L42 FUL SUB=L41
L45               STR L42
L46            50 S L45 CSS SAM SUB=L44
L47        120715 S L45 CSS FUL SUB=L44
L48               STR L45
L49            20 S L48 CSS SAM SUB=L44
L50          1394 S L48 CSS FUL SUB=L44
L51        120715 S L47,L50
L52          8186 S L44 AND (C2H4O OR C3H6O OR C4H8O) NOT L51
L53          2793 S L44 AND C3H6O AND C2H4O
L54           438 S L44 AND C3H6O AND C4H8O
L55           835 S L44 AND C2H4O AND C4H8O
L56          2987 S L53-L55 NOT L52
L57        120715 S L56,L51
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L58             STR
L59          50 S L58 SAM SUB=L57
L60       93973 S L58 FUL SUB=L57
L61             STR L45
L62          50 S L61 CSS SAM SUB=L60
L63       22247 S L60 AND (C2H4O OR C3H6O OR C4H8O)
L64             STR L42
L65          50 S L64 CSS SAM SUB=L60
L66             STR L61
L67          50 S L66 CSS SAM SUB=L60
L68             STR L66
L69          50 S L68 CSS SAM SUB=L60
L70             QUE L68
                SET COST OFF
L71             STR L68
L72          50 S L71 SAM SUB=L60
L73             STR L58
L74          50 S L73 SAM SUB=L60
L75       46979 S L73 FUL SUB=L60
L76       10511 S L63 AND L75
L77        8311 S L76 NOT (S OR P)/ELS
L78        7325 S L77 NOT (CL OR BR OR I OR F)/ELS
L79         387 S L78 AND 2/NC
L80         271 S L79 NOT (C3H4O2 OR C4H6O2)
L81         265 S L80 NOT C8H8
L82         116 S L79 NOT L80
L83          17 S L82 AND NR>=1
L84          99 S L82 NOT L83
L85          15 S L84 AND ("(C2H4O)NC4H4O4" OR "(C2H4O)NC5H6O4" OR "(C3H6O)N(C3
L86          84 S L84 NOT L85
L87          36 S L86 AND C4H6O2
L88          48 S L86 AND C3H4O2
L89           1 S L88 NOT 79-10-7/CRN
L90          47 S L88 NOT L89
L91          35 S L87 NOT C2H6O2
L92        1137 S L78 AND 3/NC
L93         198 S L92 AND SALT
L94          82 S L90,L91

     FILE 'HCAPLUS' ENTERED AT 13:46:05 ON 16 APR 2008
L95         486 S L94
L96           1 S L95 AND L1-L13
                SEL RN

     FILE 'REGISTRY' ENTERED AT 13:46:34 ON 16 APR 2008
L97           6 S E15-E20

     FILE 'HCAPLUS' ENTERED AT 13:47:14 ON 16 APR 2008
L98           4 S L97
L99           1 S L98 AND L1-L13
L100          1 S L96,L99
L101         81 S L98,L95 AND PY<=2004 NOT P/DT
L102        314 S L98,L95 AND (PD<=20040123 OR PRD<=20040123 OR AD<=20040123) A
L103        395 S L101,L102
L104          0 S L100 AND L103 NOT L40
L105          2 S L103 AND H01M/IPC,IC,ICM,ICS
L106          4 S L103 AND H01B/IPC,IC,ICM,ICS
                E POLYMER ELECTROLYTES/CT
                E E3+ALL
L107       4934 S E9
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L108        5139 S E14
L109        9949 S E12
                 E E8+ALL
L110        5662 S E5+OLD
                 E E7+ALL
                 E E12+ALL
                 E E6+ALL
L111       22673 S E16+OLD
L112          16 S L103 AND L107-L111
                 E BATTERY/CT
L113       62929 S E4+OLD,NT OR E5+OLD,NT OR E6+OLD,NT OR E7+OLD,NT
                 E E8+ALL
L114       10110 S E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT
                 E BATTERIES/CT
                 E E3+ALL
L115      138079 S E1 OR E2+OLD,NT OR E3+OLD,NT OR E4+OLD,NT OR E5+OLD,NT
L116           2 S L103 AND L113-L115
L117          20 S L105,L106,L112,L116
L118          27 S L103 AND ?ELECTROLYT?
L119          18 S L117 AND L118
L120           2 S L117 NOT L119
L121           9 S L118 NOT L119
L122           5 S L119 AND (BATTERY OR ?CATHOD? OR ANOD? OR ?ELECTRODE? OR (FUE
L123          13 S L119 NOT L122
L124           4 S L122 NOT L40
L125           1 S L122 NOT L124
L126          12 S L103 AND ELECTR?/SC,SX
L127           8 S L126 NOT L122

     FILE 'REGISTRY' ENTERED AT 13:58:36 ON 16 APR 2008

     FILE 'HCAPLUS' ENTERED AT 13:58:52 ON 16 APR 2008
L128       29204 S L75
L129       29199 S L128 NOT L40,L124
L130         305 S L129 AND L107-L111
L131         124 S L129 AND L113-L115
L132         129 S L129 AND H01M/IPC,IC,ICM,ICS
L133          61 S L130-L132 AND PY<=2004 NOT P/DT
L134         251 S L130-L132 AND (PD<=20040123 OR PRD<=20040123 OR AD<=20040123)
L135         312 S L133,L134
                 SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 14:05:03 ON 16 APR 2008
L136         486 S E1-E486
L137          45 S L136 AND 2/NC
L138          34 S L137 NOT L94
L139           4 S L138 AND ("(C3H4O2.(C2H4O)NC5H6O4)X" OR C14H22O7 OR C16H26O7
L140         139 S L136 AND 3/NC
L141          88 S L140 NOT SALT
L142          39 S L141 AND (C2H4O OR C3H6O OR C4H8O)
L143          12 S L142 AND N/ELS
L144          27 S L142 NOT L143
L145          26 S L144 NOT B/ELS
L146          25 S L145 NOT (CL OR F OR BR OR I)/ELS
L147          24 S L146 NOT C14H22O4
L148          23 S L147 NOT C10H14O5
L149          22 S L148 NOT UNSPECIFIED
L150           2 S L149 AND C6/ES
L151           1 S L150 AND C8H8
L152           1 S L150 NOT L151
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L153         21 S L149 NOT L152
L154         19 S L153 NOT (676168-27-7 OR 75760-37-1)
L155         51 S L140 NOT L141
L156         39 S L155 NOT (N OR S OR P OR SI)/ELS
L157         24 S L156 AND (C2H4O OR C3H6O OR C4H8O)
L158         23 S L157 NOT "(C2H4O)NC19H28O2"
L159         21 S L158 NOT ("(C2H4O)NC18H26O2" OR "(C2H4O)NC17H24O2")
L160        302 S L136 AND NC>=4
L161        152 S L160 AND (C2H4O OR C3H6O OR C4H8O)
L162         79 S L161 NOT (N OR S OR P OR SI)/ELS
L163         33 S L162 AND C6/ES
L164          3 S L163 AND (C4H6 OR (C8H8 AND NA))
L165         46 S L162 NOT L163
L166         39 S L165 NOT UNSPECIFIED
                SEL RN 15-27 29 30 33-39
L167         22 S E487-E508
L168         69 S L139,L154,L159,L164,L167

     FILE 'HCAPLUS' ENTERED AT 14:25:22 ON 16 APR 2008
L169        478 S L168
L170         50 S L169 AND PY<=2004 NOT P/DT
L171        340 S L169 AND (PD<=20040123 OR PRD<=20040123 OR AD<=20040123) AND
L172        390 S L170,L171
L173         18 S L172 AND H01M/IPC,IC,ICM,ICS
L174         42 S L172 AND L107-L111
L175         20 S L172 AND L113-L115
L176         53 S L173-L175
L177         51 S L176 AND ?ELECTROLY?
L178          2 S L176 NOT L177
L179          1 S L178 NOT SHEETS
L180         25 S L177 AND ?POLYMER?(2A)?ELECTROLYT?
L181         26 S L179,L180
L182         26 S L177 NOT L181
                SEL AN DN 8 16 24
L183          3 S L182 AND E509-E517
L184         16 S L181 AND (CAPACITOR OR BATTERY OR FUEL CELL OR ELECTR? CELL)
L185         19 S L183,L184
L186         10 S L181 NOT L185
                SEL AN DN 7 8 9 10
L187          4 S L186 AND E518-E529
L188         23 S L185,L187
L189         23 S L188 AND (?BATTER? OR ?CONDUCT? OR ?ELECTROL? OR ?ELECTRI?)

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